MUNICIPAL DEBT/INTERGOVERNMENTAL FISCAL RELATIONS

A Study of Options and Guidelines in the Financing of Local Public Goods and Services

by

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ABSTRACT

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Our subject is the role of municipal debt in the financing of local public facilities in the United States. Our method is to reconsider a classic statement of the purposes of municipal indebtedness in the light of history and of recent developments in the field of intergovernmental fiscal relations in order to provide guidelines for its use in the future.

The classic thesis asserts a municipality should finance only "productive" capital investments, defined as those that generate cash in the form of revenues from public enterprises and property assessments. The antithesis is the sense of social responsibility that impels expenditures beyond the fiscal capacity of local governments. We consider the "productivity" of actual expenditures and the possibility of developing contemporary opportunities for classically-productive municipal investment. Our study is in the context of substantive changes during the 20th Century, including: the income tax, the special district, the revenue bond, the federal and State grant-in-aid systems, and the new willingness to compensate for intra-metropolitan economic disparities and inter-jurisdictional externalities.

One product of the analysis is an appreciation of the need for a metric that differentiates the "productive" from the general-welfare effect of the various purposes of municipal outlays and that can serve as a standard in the distribution of both bloc and programmatic grants-in-aid. Another product is an appreciation of the potential effectiveness of new forms of special districts operating in the fields of housing, health, education, transit, and other functions; if subsidized by higher levels of government and equipped to furnish facilities for occupancy and control by municipal agencies, their use would change the demand for and the form of municipal indebtedness.

Our analysis shows that the forms of municipal indebtedness are determined by political considerations to a substantial degree. A major program of sharing federal revenues with the State-local sector might eliminate some of the need for local indebtedness. Moreover, municipal obligations might be bought by State or federal agencies rather than by private investors, especially if bond interest becomes subject to federal taxation and if the market for State-local securities continues to narrow. These factors, combined with the prospect that facilities can be leased from new special districts, suggest that municipal debt will diminish in significance. Until that time, however, in the midst of the diversity of local government in America and in recognition of the political compromises that result in sub-optimal solutions, we conclude that the productivity principle retains some power to generate constructive insights for those concerned with the finances of an individual municipal general government and with fiscal balance for the federal system.

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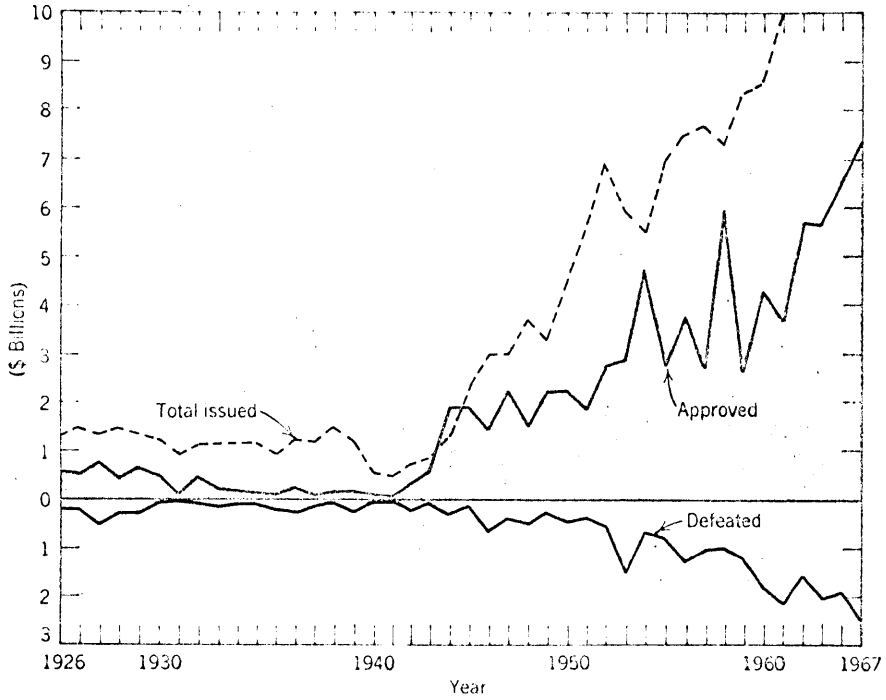


FIGURE 1: State and Municipal Bond Election Results and Long-term Issues Sold, By Year, 1926-1967

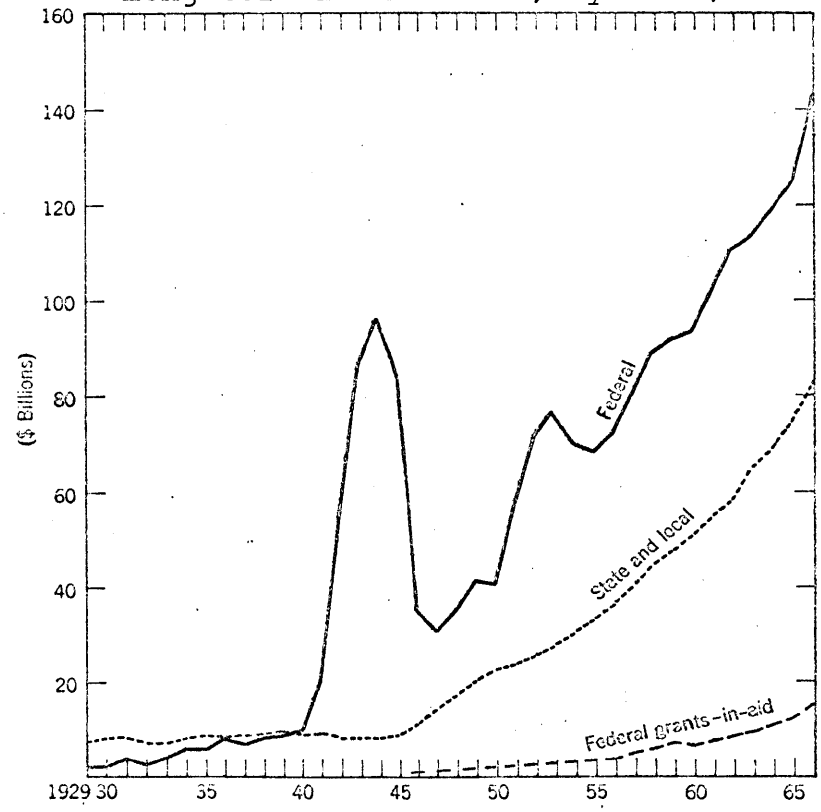


FIGURE 2: Government Expenditures, Federal and State-Local, Calendar Years 1929-1966, and Federal Grants-in-aid 1946-1966

Chapter 1

TOWARD NEW POLICIES

A. Our approach to the subject

Our subject is the role that municipal debt should play in the financing of local public facilities.[1] Our objective is to provide some needed and useful guidelines and perspectives for local officials who are trying to make more efficient use of their community's borrowing capacity and for those who are attempting to create a more rational basis for intergovernmental fiscal relations.

What we do in this essay is to take a classic statement of the purposes of municipal indebtedness and reconsider it in the light of recent theories and trends in the multi-dimensional field of intergovernmental relations. By this means, having used the original statement as a working hypothesis to be validated and reinterpreted, we arrive at a set of guidelines in Chapter 9.

The particular statement we investigate asserts that a municipality should finance only those capital investments that promise to be "productive," i.e., that would generate surplus revenues from

the operation of public service enterprises and/or that would stimulate a flow of tax revenues to the municipality.

When we deal with this putative assertion in the context of real-life intergovernmental relations, we find that its rigid logic of (municipal) corporate finance must be tempered by a mature understanding of the way in which the 80,000 diverse local governments implement their citizens' individual perceptions of social responsibility, political reality, and economic policy. Our national search for equity has created the demand for high levels of public goods and services well distributed among the population. Our national search for efficiency has stimulated the formation of autonomous special-district governments to administer and finance services that are beyond the capability of individual municipal general governments. Our national inclination for local self-government has inhibited the establishment of direct operations by the federal and State governments but led to the creation of the grant-in-aid programs by which these higher-level governments can simultaneously influence and help finance local activities.

We begin our reconsideration of the productivity principle by observing its development and application in the 19th Century, which was also the period when national sentiments concerning the scope of public enterprises and the relative merits of borrowing and taxation were being turned into the legal foundation for municipal finance in the several States (Chapter 2).

Continuing into the 20th Century, we see the old productivity principle submerged as municipalities began to expand the range of

their activities in the public interest. At the same time, however, the income and sales tax movements gave new fiscal muscle to the federal and State governments, which undertook the construction of many facilities contributing to the development of urban areas and also supplemented municipal revenues with grants-in-aid. A second important development was the emergence of the special district form of government. Chapter 3 ends with an examination of the current philosophies on fiscal balance, involving the reallocation of revenues available to governments and the potential impact on the municipal bond field from loss of tax exemption, the introduction of economic stabilization and systems programming as factors in local budgeteering, and the prospective sharing of federal revenues with cities as well as States. The federal system, as we thus come to see it, has found a variety of methods to compensate for the limitations that the productivity principle imposes even on communities that have the fiscal capacity to raise tax rates to cover increased current and capital expenditures. We find, however, a definite need for some means of measuring the strictly-productive and nonproductive components that are mixed in each local investment. We also discover in Chapter 4 that there are still many ways for municipalities to obtain the use of facilities without recourse to the sale of bonds and to acquire additional productive assets.

Next we turn to actual data for an indication of the extent to which municipalities sell bonds for productive purposes. Chapter 5 includes a basic functional analysis of current and capital expenditures by level of government, together with a case study of a

representative city (Worcester) in recent years. The study in Chapter 6 of the types of bonds actually sold for productive and other purposes returns the discussion to the function of indebtedness in the system.

Our problem at this point is to define the normative elements in the relation of municipal debt to the job of local governance. The key to the analysis is the fact that each local political jurisdiction is required to have voter consensus to issue general obligation bonds and tends to resort to revenue bonds when a facility will serve a population that is larger or smaller than the population of the particular government. In short, voters do consider a bond issue non-productive if the facility financed provides uncompensated benefits for citizens of a political jurisdiction that is not co-extensive with the issuer. Facilities that are productive in the classic sense can be financed by either revenue or general obligation bonds (Chapter 7).

We are then confronted with the task of providing a normative basis for the whole system of municipal finance of which indebtedness is a part. The system we formulate is based upon the empirical and theoretical findings of earlier chapters concerning the primary functions of municipal governments; the tendencies for each level of government to have predominent access to specified sources of revenue; the need for a method of measuring the joint productive and unproductive components of each type of municipal investment; and the tendency for general obligation bonds to be associated with certain kinds of productive projects. The system as we describe it is optimal only in the sense that it seems to reflect reasonably

accurately both (a) the central tendencies of the existing structure and (b) the form of fiscal balance advocated by such groups as the Advisory Commission on Intergovernmental Relations. In any case, it provides a useful theory by which to evaluate the new types of special district governments that are being established to finance projects that would be non-productive for a municipal general government (Chapter 8).

Guidelines for municipal governments and for the federal and State dispensers of grants-in-aid are then presented in Chapter 9.

B. Context

The concept of "productivity" of local public investment stands in contrast to, and as a limitation of, the more general concept of local governments as purveyers of social welfare and other redistributive services to people. "Productivity" is not a term that can yet be defined with precision, for, together with the fiscal benefits mentioned earlier, it encompasses a range of intangible values for the citizens footing the bill for the services provided. So long as fiscal imbalance characterizes the American federal system, however, we believe that the concept will be useful in evaluating municipal expenditure patterns.

What fiscal imbalance means is that there is a gap between the sources of funds and the governmental unit making the expenditures. The 20th Century has seen constructive changes in the composition of the 81,248 general, school, and special-district governments in the United States as of 1967, in the programs of financial assistance offered by the federal and State governments, and in the nature of the demand for local public goods and services, but nothing has been done to free the municipal general government from balancing its accounts in the same manner as a business corporation (and with the same need for the productive use of its fiscal resources). The reader is referred at this point to Appendix I, our study of the formal relationship in any municipality between intergovernmental revenues, property tax and other local revenues, borrowings, and current and capital outlays.

We recognize that many public expenditures are "productive" for the nation as a whole. The value of good health and a good education for the the individual and hence for the nation are clearly in this category. The

question to be faced is the extent to which such social welfare expenditures at the local level can be productively related to the municipality's own economic and fiscal expectations. For economists generally, "productivity" implies the creation of net benefits (however defined) and is related to the doctrine that investment is warranted in any program up to the point at which the marginal utility of investment in all alternative programs is equal.

However, we are dealing with local general governments whose jurisdictions are not ordinarily coextensive with the domains of those who pay for or benefit from the public services produced. We have, therefore, turned to the more restrictive definition of productivity for a local public economy, covering only investments that generate cash profits from public enterprises and/or a flow of tax revenues, as originally formulated in the writings of Bastable and Adams. In the text, we also examine the proposition that a fraction of each type of social welfare expenditure falls within the definition of the productivity of local public investments, because that fraction provides public services that support a given property valuation in a given community. The discriminating power of this expanded "productivity" concept is particularly useful when, for the usual mixture of political and economic reasons, that community can no longer simply increase its tax rate to generate the revenues required.

In the last analysis, liberal-conservative politics is the stuff of which municipal bond finance is made. We write in the context of change, and there are a number of reasons to expect more fundamental alterations in the structure of intergovernmental fiscal relations than might have been likely before the intense pressure of urban growth in the post-World-

War II decades gave the subject its present high priority:

(a)

The cities can now claim to be full members of the federal system, bearing independent responsibilities formerly subsumed to the States. The growing status of the cities since the 1930's is a well-documented reaction to the emergence of social and economic issues that the States were unprepared to handle but which could be approached with federal programs administered by city governments or metropolitan districts.[2]

(b)

For the first time, reasonably adequate data about the operations of an exceedingly complex system have become available and have been analysed.[3]

(c)

In contrast to earlier generations, our perceptions of inefficiencies of government in the metropolis, of inequalities in the distribution of public goods and services, and of the divergent politics of suburbs and central cities as people confront the issues of race and poverty have all become razor sharp in recent years. These perceptions impel the nation, for the sake of domestic tranquility and the general welfare, toward structural reforms of the federal system and toward the introduction of a permanent sharing of federal revenues with State and local government.

(d)

Change, or at least what Gardner calls continuous renewal of our antiquated institutions, has become as necessary as it is desirable.[4]

The drain on our resources, caused by the tremendous increase in demand for public services as well as the wastes connected with the Viet Nam was, have brought us to the verge of fiscal embolism. One sees new stridency in taxpayer revolts (such as the 1968 fight in California over the Watson Amendment), school systems that close in mid-term for lack of funds, cutbacks in local welfare budgets, and, not least, new bond issues of high quality withdrawn because no bids were forthcoming from underwriters in the glutted market for tax-exempt State and local securities.[5]

The basic policy questions as to the role of municipal debt to which this dissertation is addressed have been treated only lightly, if at all, in the mass of descriptive and analytic studies of fiscal imbalance in the American federal system that have been published since World War II. We think it important to explore them now, in the hope of contributing some needed and useful perspectives to those immersed in the day-to-day scramble to finance capital expenditures, sell bond issues, balance local budgets, incorporate new programs, and find new methods of raising and distributing revenue, all in competition with other units of government.

Chapter 2

DEVELOPMENTAL STAGE

A. Critical episodes in the 19th Century[1]

APPENDIX B: Historical Foundations of the Structure of Local Borrowing for Public Goods

In the beginning, cities were small, municipal services were limited with respect to both supply and demand, and the need for local public capital was slight. The nation was eager to develop its interior, and, in order to finance "internal improvements," the federal government was instructed to sell public lands. Surplus revenues therefrom were to be, and were, distributed to the States.

The idyllic character of the structure was shattered by events, but certain principles represented by the original concept need to be exhumed for present use. The range of public services at the level of the city was indeed narrow, and it was proper to assume that local citizens would be able to finance whatever improvements were voted by the freeholders. There was little question but that certain public goods that served the general or national interest (at that time primarily represented by economic development projects such as canals

and turnpikes) should be financed by the federal government from its delegated sources of revenue (primarily sales from the Public Domain).

The first situation to corrode this idyll was a triumph of localism, the refusal on the part of States to permit the national government to manage the "internal improvements" it could finance. Thus came Monroe's veto of the Cumberland Road Bill and Jackson's veto of the Maysville Road Bill.

Next came the drying up of federal sources of income as revenues from the Public Domain petered out. The availability of taxes on incomes at that point in the 1830's would have preserved the structure of intergovernmental fiscal relations conceived by the founders. When, after a few reckless years and under the protection of the XIth Amendment, certain State governments defaulted on their debt obligations, both the federal and State levels of government were left without the ability to finance local public capital investment projects.

The original structure of intergovernmental fiscal relations was then turned upside down. The debacle of State credit truncated the direct role of the States after all efforts to have the federal government assume the burden, along the lines of the 1843 Congressional Report on Relief of the States, had been in vain.[2] Although restrictions were placed by voters upon the States' freedom to incur debt and levy taxes, the prohibitions did not appear to apply to the local subdivisions their legislatures could create.

Internal improvements were still demanded across the land. It was reasonable to be sanguine about America's economic prospects,

and immigration was providing large amounts of labor to develop both the interior and the rapidly growing cities. Thus it happened that municipal corporations, those political subdivisions of the States that did not have the States' sovereign immunity from suits for the payment of debt, became the fiscal tools of a new breed of economic developers, private entrepreneurs who happily agreed to employ the funds that municipal corporations could borrow.

Financing for railroad companies was added to a long list of other industrial, commercial, and banking needs of the economy, and the federal government was generous in its support of railroad building, providing large tracts of land for the purpose. The States were impelled to pass liberal laws for the incorporation of unregulated development corporations as "it became the general cry that public works should be carried on by private enterprise;" moreover, "it was no difficult task" to obtain authority from State legislatures to enable minor civil divisions to issue bonds in favor of private corporations of many types, including banking establishments.[3]

Hillhouse, in his masterful analysis of municipal bond trends and defaults between the 1840's and 1930's, points out that the practices involving municipalities and private corporations referred to above began before the retirement of the States from the field, and it was only the process that was accelerated after the 1840's.[4]

Municipal debt went from $20 million in 1840 to $200 million in 1860, $328 million in 1870, and, in spite of the growing disillusionment with the profitability of the financial and industrial ventures

for which municipal credit had been tapped, to $702 million in 1880, in the middle of the last period of repudiation.[5] The entrepreneurial disappointments, combined with new taxes imposed to service the debts, led to borrowing and taxing restrictions upon municipalities during the 1865-1880 period, similar to those that had yoked the State governments a generation earlier:

> Prior to the panic year 1873 comparatively little notice seems to have been taken of local debts.... The crisis of 1873 gave an opportunity for a full, if somewhat hysterical discussion of the whole question of municipal indebtedness and the serious nature of the situation was exposed.[6]

The cities themselves continued to grow rapidly, and by the early 1890's municipal indebtedness had resumed its upward pace. Cities entered the 20th Century with a full set of constitutional and statutory restrictions, and some of the larger cities were already severely pinched by these limitations on taxing and borrowing powers.

Unfortunately, a side effect of overturning the original fiscal structure was to debase even further the concept of public service in local government. In many localities, municipal officials were hardly more than useful adjuncts to the private sector and to machine politicians until the situation became so bad that the municipal reform movement began to take hold in the 1880's.[7]

The municipal reformers succeeded in improving municipal administration by introducing civil service, accounting controls, and various mechanisms for elections. They succeeded in widening the scope of services provided, especially in education and health (including building regulations). They failed to provide new revenue

sources to match the new responsibilities, and they failed to keep the new suburban communities within the fiscal orbit of the older cities which were the object of their concern.

APPENDIX C: Note on the Municipal and Intergovernmental Reform Movements

B. Policy on private vs. public enterprise

Private enterprise under laissez-faire principles came into its own with respect to social capital when the sovereign federal and State governments abandoned the field in the decade or so before the Civil War. At the same time, cities were growing rapidly, and there remained the memory and continuing example of local governments in both Europe and America that owned and operated necessary utilities, that obtained revenues from the sale and rental of land and commercial facilities and franchises, and that enjoyed surplus revenues which could be devoted to general municipal purposes. The situation is well described in the quotation from Mumford's The City in History:

> "Neither a pure water supply, nor the collective disposal of garbage, waste, and sewage, could be left to the private conscience or attended to only if they could be provided for at a profit.
>
> "In smaller centers, private companies might be left with the privilege of maintaining one or more of these services, until some notorious outbreak of disease dictated public control; but in the bigger cities socialization was the price of safety; and so, despite the theoretic claims of laissez-faire, the nineteenth century became, as Beatrice and Sidney Webb correctly pointed out, the century of municipal socialism. Each individual improvement within the building demanded its collectively owned and operated utility: watermains, water reservoirs, and aqueducts, pumping stations: sewage mains, sewage reduction plants, sewage farms. Only the public ownership of land for town extension, town protection, or town colonization was lacking. That step forward was one of the significant contributions of Ebenezer Howard's garden city."[8]

Municipal socialism refers to the extension of function to include the provision of utilities and welfare services (including education) that were either not necessary for pre-19th Century cities or were

provided, if at all, within the private sector. Public education, in fact, was added to municipal responsibilities at the end of the 19th Century. The first inventory of municipal public schools and ownership of revenue-producing facilities was made about 1900.[9]

The best program for municipal socialism was provided by the Fabians.[10] They observed that the growth of cities in the 19th Century created a greater demand for utility services and social services than had been required in cities before the Industrial Revolution. They held that cities should be able to provide such services from revenues from the property values such growth sustained. Municipally-owned utilities, therefore, should produce the necessary surplus revenues for social services. They saw no reason to give away such sources of revenue to the private sector.

In America, the typical community chose to offer the municipal social services but gave away its right to derive revenue from utility services.[11] This set of choices was characteristically American -- good-hearted in offering education but devoted to private enterprise as the means of providing "public" utilities. The choice made fiscal imbalance inevitable.

In the United States, municipal bonds have often been issued to finance municipally-owned "public utilities" (as distinct from public bonds whose proceeds were to be advanced to privately-owned utility companies). Communities made their choices at the end of the 19th Century and the beginning of the 20th Century as to whether their needs would be better served by public or private operations. Over time, experience with municipally-owned utilities has eroded the

earlier concept that services should be provided "at cost", and recent writings indicate a tendency to return to the even more ancient concept of municipal ownership as a source of surplus revenues, much to the distress of "conservatives" and often to the delight of local taxpayers.[12]

C. Policy on borrowing vs. taxation

Another basic conflict that runs through the financial history of local government in America relates to the choice between taxation (and pay-as-you-go finance) and borrowing. Taxation was not intended when the federal and State governments set about to construct "internal improvements" in the early 19th Century: the growth of the economy was supposed to provide revenues by means of user charges and sales of land to pay interest and retire debt. As the British press observed when some States repudiated their debts in the 1840's, the Americans were loath to tax themselves in order to service their debt.[13] The methods of taxation become established in the restrictive laws of the later 19th Century and provided for combinations of benefit taxation (either as user charges, special assessments, or pay-as-you-go plans) and general taxation (with ad valorem property taxes as a rough index of ability-to-pay).

The fear of governmental irresponsibility in issuing debt led to innumerable restrictions on the freedom of States, and then municipalities, to sell bonds for public improvements. Current opinion in intergovernmental relations seems to favor relaxation of referendum requirements and other substantive revision, even abolition, of arbitrary restrictions of this type, while preserving the principle that borrowing to spread capital costs over the generations that benefit should be limited in scope and amount.[14]

The fear of taxation to service bond issues and to extend the financial resources of (corrupt?) local officials led to complementary restrictions on the power of local governments to tax the property

that represented their major source of revenue. Unfortunately, as the economic historians of the late 19th Century recognized, American cities had given away their birthright to the private corporation, for, in general, cities did not obtain either revenues from or control over the level of service provided by privately-owned "public" utilities.

The search for alternatives to the property-tax/debt-limit bind intensified in the 20th Century. Durand's 1900 study for the American Economic Association, "Taxation as a Partial Substitute for Borrowing to Cover the Cost of Permanent Municipal Improvements," is an early example of economic thought on the subject.[15] Local governments have been moderately successful in finding alternative tax sources, especially at the State level where non-property taxation is more feasible, but property-secured general obligation debt had commensurate growth through the expansionist periods of the 1920's and the post-World War II era as the property tax bases of local governments responded to new construction and inflation.[16]

The current pattern is illustrated by data in the 1962 Census of Governments, as calculated by the Advisory Commission on Intergovernmental Relations and as shown in Figure 3, where we have plotted each State's tax effort index against its percentage of total State-local revenues derived from property taxes.[17]

In general, the older States rely more heavily on property taxes. Chamberlain remarks, in his 1913 critique, that the southern States, notorious for repudiating debt, were also unwilling to tax themselves, and the southern contingent still shows low levels of both tax effort and property taxation.[18] The tendency for slow-growing low-

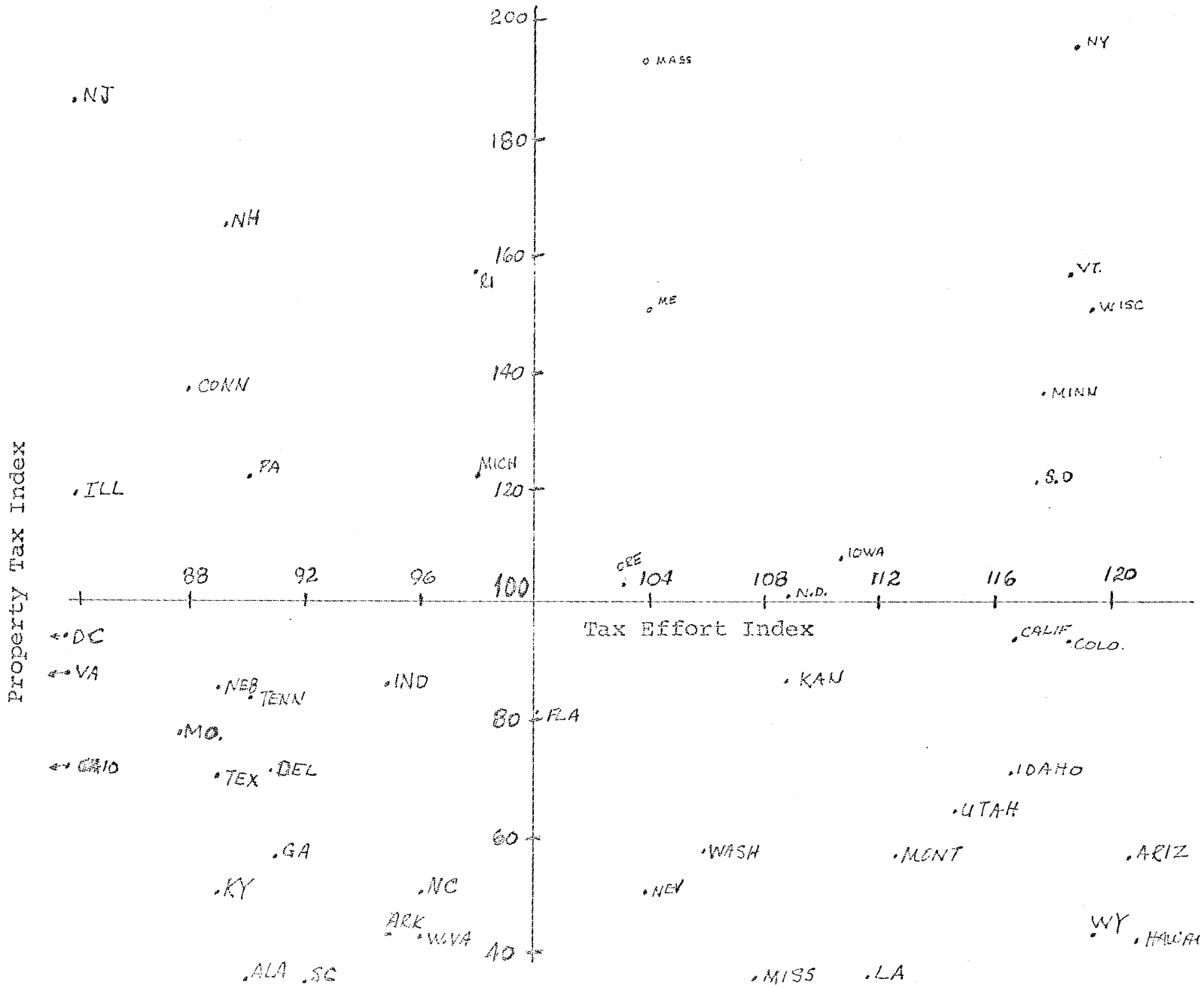


Figure 3

Tax Effort Index vs. Property Tax Index
Source: ACIR calculations.

population States in the West to have fairly high tax effort indexes, and for the higher-income industrial States to have somewhat lower tax-effort records, can also be seen in the current pattern. Special note should be made of the positions of California and New York, where high levels of social programs for large urban populations have brought them into the higher ranges of tax effort.

Chapter 3

MAJOR POLICY ISSUES IN THE 20TH CENTURY

A. Initial conditions and change in sources of revenue

1. Initial Conditions

The 20th Century is notable for two additions to the system of intergovernmental fiscal relations of major significance to the municipal bond field. These two factors are (1) the Constitutional Amendment concerning the income tax and (2) the Supreme Court's decision giving local government status to special districts which do not have the power to tax.[1]

In all other respects, we continue to operate under the framework developed in the 19th Century. That framework, sharply limiting municipal powers through State restrictions on taxing and borrowing, is based upon Judge Dillon's 1868 ruling in City of Clinton v. Cedar Rapids and Missouri Railroad Company, 24 Iowa 455, later upheld by the Supreme Court.[2] "Dillon's Law," as it has come to be known, sets out unequivocally that a municipal corporation has no rights except those permitted by State legislative acts and constitutions. To change that framework, it is well recognized that pressure must be

brought upon State governments, a conclusion that has led to the effort to force reapportionment of their legislatures, and, in any case, to obtain enactment of the kinds of enabling legislation, administrative reorganizations, and subsidies outlined by such organizations as the Advisory Commission on Intergovernmental Relations (ACIR).

The muckrakers and the municipal reformers worked diligently to improve municipal administration at the turn of the Century (and began the studies now carried on by ACIR). One result of their concern was the collection and analysis of facts and figures about cities that had never been available before. The National Resources Planning Board discovered in the 1930's, when the federal interest in urbanism and the problems of cities began to be formalized, that the data were better in 1900 than they were immediately prior to World War II.[3] The story of the attempt to correct this dearth of data is told in:

APPENDIX D: Development of Data Sources.

At the turn of the Century, the original debate as to the most socially useful form for the city to take in order to be both efficient and accountable to the needs of people was tapering off. Bryce had already noted how the development of suburbs allowed the rich to escape the burden of inner city taxes and debt burdens.[4] Such eminent writers as Ely (in The Coming City) were still advocating social control of public facilities and utilities as a means of instituting reform and preventing the dismemberment of the

community through suburbanization.[5]

With few abatements in the century following the Civil War, the centripetal growth of urban populations, the centrifugal movements to the suburbs within urban areas, the general expansion in public activities of both the welfare and revenue-producing types, and the proliferation of special-function district-type governments continued. The first reasonably accurate enumeration of local governments in the United States was not available until the mid 1930's.[6]

Older cities had largely made their choices by 1900, in accordance with state laws, as to whether their public schools would be a component of the municipal administration ("dependent" schools) or subject to administrative control and finance by an independent board or commission with the power of taxation. Since the 1920's, there has been a consistent effort to merge and otherwise reduce the number of independent school districts selling tax-supported bonds, while several states have established school building authorities whose bonds are secured solely by leases from tax-supported governments.

2. Change in sources of revenue

Between 1902 and 1913, the dollar volumes in State and local finance doubled, whether measured in terms of revenues, expenditures, capital outlays or debts outstanding; and the municipal component was five times as great as the States' total.[7] Federal programs contributed $7 million in 1902 and $12 million in 1913, while property taxes represented 70 percent of total State-local revenues.

Between 1913 and 1927, the volumes generally tripled, but the States had become slightly more active, their expenditures being one-third as great as their subdivisions' totals by 1927, a year when the total federal contribution had risen to $116 million.

Figure 4 shows a steady growth of all sources of revenue to cover the widening scope of local expenditures. Property taxes, 66 percent of total State and local revenues in 1927, represented not quite 30 percent of the total $83 billion in Fiscal 1965-66. Revenue from taxes on sales, gross receipts, individual and corporate incomes had risen through the years to represent 31 percent of the total in fiscal 1965-66, slightly more than the share from property taxes. The category, "all other revenues," including licenses and other taxes and charges and miscellaneous revenues but not including revenues of publicly owned utilities and liquor stores or of insurance-trust activities, has increased in amount to over $19 billion but, as a share of total revenues, represented about the same percentage in 1965-66 as in 1927, slightly less than a quarter.

Meanwhile, $116 million from the federal government in 1927 had increased to a figure of $13 billion in 1965-66, representing not quite 16 percent of the total revenues received.[8]

FIGURE 4

TOTAL REVENUES OF STATE/LOCAL GOVERNMENTS BY SOURCE, SELECTED YEARS AND VARIOUS SERIES, 1927-1965-66.

Source: Economic Report of the President, 1968. Table B-68.

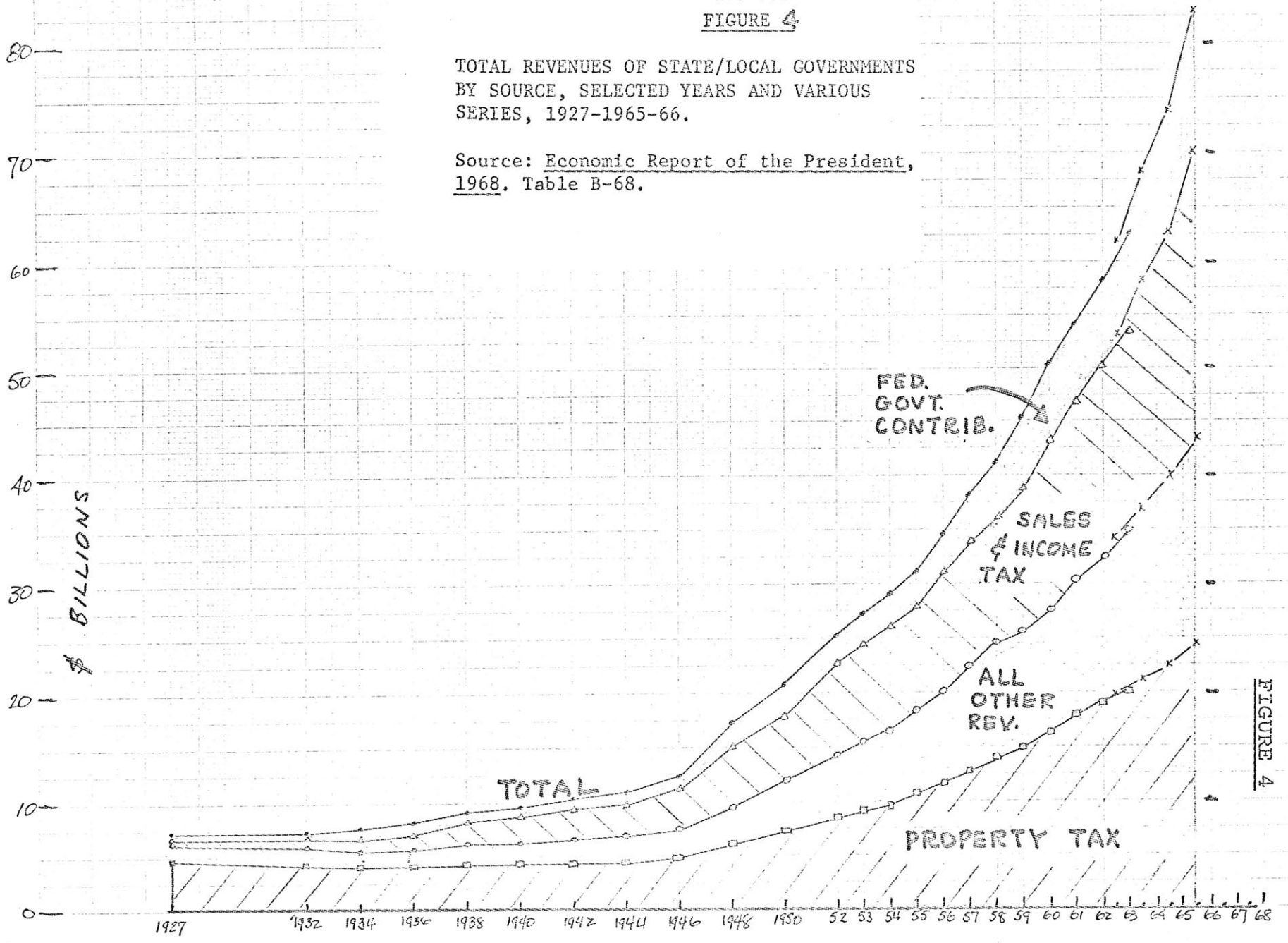


FIGURE 4

B. Circumventing restrictions with special districts and revenue bonds

The way in which both State and local governments established special districts for the performance of one or more public or quasi-public functions, operating over one or more political jurisdictions, with and without the power to tax, and more or less responsive to the direction of rational planners and to the electorate, is one of the major topics in 20th Century local finance.[9]

We begin by noting that special districts have been financed by both guaranteed (general obligation) and non-guaranteed (revenue bond) types of debt obligations.

Revenue bonds are secured by a pledge of operating revenues, tolls, charges, and sometimes by a given tax source, without the general pledge of the taxing power. Long used, but sparingly, for financing utilities, revenue bonds have come into prominence after extended litigation in connection with the bonds issued by the Triborough Bridge Authority (N.Y.C.) and the Port of New York Authority. The Court ruled that authority-form governments without the power to tax were entitled to issue bonds exempt from federal income taxes if they were created for an authorized "public" purpose.[10]

The vast outlays required of State and local governments after World War II spurred the use of revenue bond finance. Most of the major turnpikes of the early 1950's were financed in this manner, sometimes with contingent guarantees by State or other taxing governments to fortify the pledge of operating revenues.[11] Revenue bonds now represent about forty percent of all tax exempt financing.

The purposes for which revenue bonds are issued have come under the careful scrutiny of the courts in many States. Some States have established narrow definitions of public purpose even for general obligation bonds; the litigation to permit revenue bond financing has often served in such cases to expand the scope of all local enterprises. In jurisdictions where greater discretion has been put into the hands of local administrators, the courts have had to rule on the reasonability and appropriateness of their decisions as to purpose.

As the range of purposes for which G.O. and revenue bonds can be sold has been enlarged, bond attorneys have had to develop new forms of bond indentures, underwriters have had to develop new markets for revenue bonds, and credit analysts have had to develop more sophisticated forms of economic analysis than are usually required to project a flow of tax revenues.

The growth of revenue bond finance is eloquent testimony to the adaptive powers of local finance officers, but the process has compounded the problem of budgeting and analysis and brought forth new fears of defaulting under adverse economic conditions. In addition, since a revenue bond finances a quasi-public improvement that produces revenues by the sale of a service or commodity, it represents a cross between theories of benefit and ability-to-pay taxation and has raised many questions concerning pricing policies and the distribution of benefits resulting from the project.

The division of municipal activities into G.O. and revenue-supported operations also complicates analysis of the local economy

that is required to supply tax revenues for functions other than the purposes served by the revenue-based facility: how does the credit of a municipality change when it finances new waterworks, parking garages, or industrial plants with revenue bonds instead of using general obligations or relying upon private investors?[12]

Moreover, the revenue bond technique is associated with the development of the special district form of government, and the credit analyst must make judgments on the extent to which the combination improves the efficiency of local government by operating across jurisdictional boundaries and accomplishing necessary public purposes on an economic scale, or merely adds to the proliferation of governments. This problem is also the concern of the intergovernmental reformers attempting to improve fiscal balance under federalism and to make local governments, at one and the same time, more efficient and equitable, with both greater managerial competence and responsiveness to the electorate or the legislature.

A final word needs to be said about the record of revenue bond defaults to date. With the exception of a handful of relatively small and poorly-planned irrigation or industrial development districts, the record has been marred only by the difficulties encountered by two unfortunate toll highways: the West Virginia Turnpike and the Chicago-Calumet Skyway, both built before the adoption of the federal Interstate Highway Program and both the subject of current negotiation between bondholders and various levels of government.[13]

C. Current philosophies on fiscal balance

1. Allocation of revenue sources

The 20th Century can be characterized as the period when conscious efforts began to be made to achieve fiscal balance for the federal system as a whole, with full recognition that each unit of government, at every level, is pursuing its own fiscal goals in its own way, subject to the complex legal, political, and economic constraints that limit its prerogatives. The fact that we still have fiscal imbalance means that the proper balance between local responsibilities and fiscal resources has not yet been struck.

There has been, however, a serious effort to think through the administrative and economic effects of different taxes on the several layers of government. This effort has included studies of tax overlapping (where the same sort of tax is levied by different levels of government) and of tax incidence.[14]

At the present time, with the major sources of tax revenue fairly well apportioned throughout the system on a permanent basis, the effort has turned to the possibility of finding a formula for the distribution of federal assistance to State and local government as a means of obtaining simultaneously both equalization of tax burdens and achievement of programmatic objectives.[15]

Underlying the current approaches to the problem of fiscal imbalance are conclusions about the major events of the 20th Century within the fiscal system. Three trends stand out, each one of which has had an important consequence for the funding of capital expenditures at the local level:[16]

(a) Income tax

Heavy federal use of the personal income tax, especially since 1940, has deterred its expanded use by the States and made the national government dominant in the field, albeit with various credits for the payment of local taxes that constitute a kind of equalization.

(b) Other non-property taxes

As a consequence, State and local governments depend primarily on consumer, business, and property taxes, although there does not seem to be a dominant pattern in the way such taxes have been apportioned between local and State governments. As a result of the search for new sources of revenue over the past few decades, almost every form of tax can now be found somewhere in the tax system of each State. The ACIR currently advocates a standardization of the allocation of sources across the board.

(c) Property tax

Property taxes, however, have come to be reserved for the use of local rather than State governments. A number of suggestions are being made concerning the method of assessment and the type of collector (area-wide or municipal), but implementation of these reforms in the administration of the property tax cannot be expected to change the extent to which local governments still will rely upon it as the major source of local tax revenue, in spite of the introduction of some non-property taxes in the larger municipalities.

2. Constitutionality of taxing municipal bond interest

The Supreme Court has never ruled directly on the question of whether the federal government has the right to tax the interest paid by State and local governments on their bonds (although Marbury v. Madison established the doctrine that the States cannot tax federal property).[17] There is disagreement, as well, as to whether Congress could determine the status of exemption from federal taxation without a Constitutional Amendment, but the Treasury has continued to attack the claimed immunity of state-local bonds from federal taxation. A number of federal laws, bank regulations, and interpretations of the tax code have tended to narrow the range of purposes for which exemption will be granted (as in the case of industrial revenue bonds over certain amounts) and the manner by which institutional investors can claim the exemption (as in the Atlas case).[18]

Economists outside the Treasury tend to deflate the supposed loss of federal revenues occasioned by tax exemption on State-local securities, and the protagonists of the virtues of independent local government consider the attack upon the exemption privilege as an attack upon the institution of local government itself. However, the truly critical issues, in the opinion of this writer, beyond the continuance of tax exemption (which he favors in general as the more politically feasible and appropriate solution), are: (a) the extent to which both the federal and State governments will agree to supply funds to political subdivisions of the States for the accomplishment of a wide range of responsibilities given to these

local governments and (b) the administrative improvements to the system of intergovernmental fiscal relations and budgetary controls that will have to be developed concurrently as the framework for such revenue sharing.

The XVIth (Income Tax) Amendment, adopted in 1913, was the beginning of a process that has made state and local bonds attractive primarily to investors with high levels of taxable income. The market for state-local bonds considered exempt from federal income taxes has been fortified in relation to the market for other securities as (a) the income tax rates rose over the decades, (b) the federal government just prior to World War II elected to declare interest on its own securities fully taxable, and (c) the high investment quality of the overwhelming portion of state-local general obligations was enhanced by municipal reforms and by an admirable default record during the critical years following the 1929 stock market crash.

The market for tax exempt bonds has become dangerously narrowed, however, as (a) ever larger shares of investible savings have been placed with institutions already fully or substantially exempt from federal taxation, such as pension funds, life insurance companies, and other financial intermediaries and (b) strong inflationary biases in the economy encourage investment in equities rather than fixed-interest bonds.

The forces constricting the market for tax exempt securities have been dominant, forcing the interest rate on municipal securities to rise relative to the prevailing interest rate on taxable bonds of comparable quality, thus passing most of the financial benefits

supposedly conferred by the lower interest rates on state-local securities from the issuing governments to the small class of investors constituting the market.[19]

3. Programming federal grants-in-aid

(a) Scope

There are some 68 grant programs that sub-State local governments can participate in directly, with some 311 other programs under which the States can receive money from the federal government and pass on, if they will, to local governments.[20] The pace at which new programs have been legislated has increased each decade since the 1920's, a process that may begin to reverse itself as an effort is made to consolidate the administration of programs at the federal level and to eliminate the need for a few programs by activating some plan for sharing federal revenues with the State-local sector.

The intention in a federal categorical grant-in-aid program (and in a related State program) is to have the funds used for a specific public good or service. To ensure the dedication of the receiving local government to the mandated purpose, it is usual that there be a matching contribution by the grantee. As the planned result, the scope of local expenditures is influenced by the fiscal carrots held out to the local governments, local expenditure options are narrowed, and sometimes the amounts of local revenues required to be raised are increased.[21]

(b) Relation to the national economy

Keynes inveighed against "the principles of 'sound' finance" which, in both England and the United States, found local governments reducing indebtedness through sinking fund payments and postponing new investment at times when national policies should be anti-deflationary.[22]

This concept was developed further as the "perversity hypothesis" by Hansen and Perloff.[23] Their book was published as part of the World War II debates about postwar full-employment policy. Their thesis was that State and local government finances were perverse, that is to say, they tended to feed the inflationary fires and to increase the slides into deflation. Musgrave suggested that the best course of action was for local governments to adopt relatively stable spending programs, leaving the central government to compensate for deficit financing.[24] Rafuse's impressively thorough study of the cyclical behavior of aggregate State-local total expenditures and revenues (but with the expenditure totals consolidating the current and capital accounts) suggests that such perversity is still a serious problem. He writes:

> Far more substantial federal policy measures would be essential in the event of a serious depression. The threat to state and local revenues posed by such a possibility, and the accompanying danger that state and local governments would resort to perverse rate increases and expenditure cuts, are probably more serious today than in 1929. The reason, of course, is that the income elasticity of the state and local revenue system has been gradually increasing. The yield of the relatively inelastic property tax, for example, accounted for 63 percent of total revenue in 1929, 42 percent in 1946, and only 38 percent in 1964.[25]

Except for the greater ability and willingness of the federal government to take prompt pump-priming measures in the case of an incipient deflation of major magnitude, the risk for an individual local public borrower remains substantially the same as it was before Keynes wrote, for the sources of revenue available to a municipal borrower are not appreciably different; and the classic principles of "sound" finance are still in full force and effect for the individual municipal corporation that must balance its accounts annually. However, the proposal of the National Commission on Urban Problems (cited in section 4 below) includes use of a trust fund to enable payouts to the State and local governments to be made regularly without regard to the economic cycle.[26]

APPENDIX E: Local Debt in the National Economy

(c) PPBS vs. bloc grants

Planning-programming-and-budgeting systems (PPBS), a modern form of budgeting, again holds the promise of improving municipal administration by focussing attention on the purpose and effectiveness of public expenditures for the fulfillment of social wants, especially those financed hereafter under federal programs and applicable in metropolitan areas.[27]

As used by federal program administrators, PPBS studies are able to reckon with such items as: the cost of "spill-over" effects; the benefits to the nation expected from the increased productivity and earning capacity of better-educated individuals; and the benefits of greater efficiency (lower cost per unit of output) in delivery of services. A federal program that produces greater benefits than costs (properly measured and discounted over time) has at least some intrinsic merit.

However, program budgeting by a municipality is subject to several vitiating constraints, for the political jurisdiction of the municipality is a fiscal island. An expenditure that benefits its metropolis or that advances the national welfare may not produce net benefits for the municipality in terms of either social or fiscal returns. As Musgrave points out, the old doctrine of cash-flow productivity for a city bond issue "encourages the cement-and-steel concept of economic development," leading ofttimes to "elaborate school structures, while no adequate funds for teachers can be secured, since tax finance is required."[28]

Although there are technical problems in relating program goals

to standard municipal accounting schedules, a number of important policies at the municipal level can be usefully investigated by selective use of PPBS. In the future, PPBS may provide a means of measuring both the "productivity" of local capital outlays and the amount of subsidy required to induce the municipality to undertake a level of investment it could not ordinarily consider under the constraints of "sound finance."

4. Revenue-sharing with Cities as well as with States

The idea of revenue-sharing has been discussed since the early 19th Century when the federal government passed on surplus revenues from the sale of the Public Domain, but the problem of instituting a system for the mid-20th Century whereby cities would become full partners with the States has required agreement on some formula that would recognize:

(a) the desire for local determination of expenditure policy;

(b) the desire for programmatic control by the grantor;

(c) the competing interests and varying capacities of State governments and their political subdivisions.

The most sophisticated plan advanced so far is found in the report of the National Commission on Urban Problems (The Douglas Report). It is based upon the Heller-Pechman plan but provides, in addition, a series of bloc grants to city and county governments.[29] The authors of the new plan realize that bloc grants might be less appealing politically to the Congress than would a more restrictive set of earmarked funds, but they feel that even broad allocations for agreeable major purposes such as education, public welfare, health, and sanitation, "would hamper responsible policy-making at the State and local levels unless and until" some even more complicated mechanism were invented for assuring that the local governments involved would make proper allocations of their own funds across the board.

APPENDIX F contains the full text of the recommendation made by the National Commission on Urban Problems for revenue-sharing with

cities, as the leading example of the kind of revenue-sharing program that may finally be passed and which would become the major change of this generation in the functioning of local government and in the financing of local public construction.

Chapter 4

LOCAL GOVERNMENT VS. THE GENERAL WELFARE: AN ECONOMIC ANALYSIS

A. The limitation of cities as partners in the federal system

"Dillon's Law" and the restrictions on the borrowing and taxing powers of a municipal corporation make local governments poor partners for the more affluent members of the federal-State-local confraternity. It is ironic that cities in the 19th Century were the most financially viable elements in the triad; it is sad that now they must subject their public policies, especially in education, to the constraints of local public finance. But that is the system we have created and will have to live with until such time as a greater share of the national wealth is devoted to improving the urban environment.

The problem is that municipalities are unable to provide for the general welfare out of their own resources. A closer look at this situation is a necessary preliminary to specifications concerning the distribution of federal and State grants and concerning the allocation of a local government's borrowing capacity.

The general welfare is an imprecise term, but the purposes of local general governments are equally undefined. We are forced to define the functions of local government by describing what they do.

Quite clearly local governments are created to enhance the welfare of their citizens, but they can do so only to the extent those citizens or some other agency supply the necessary funds. A municipality is not allowed to pledge its credit unless revenues are in sight to balance the accounts; to that extent it operates in the fashion of an individual or a private corporation rather than a sovereign government.

These sentiments have not been as obvious as they seem, for they have had to be formulated out of experience and they appear to be often forgotten in modern writings on the subject of the urban crisis.

The first adequate economic studies of local public finance in America were written at the end of the 19th Century, after years of municipal defaults, after the process of urbanization accelerated, after the development of suburbs had begun, and after the range of public services to be provided by a municipality had expanded to include education, waterworks, sewers, and power utilities.[1]

APPENDIX G: The Classic Theory of Local Public Finance is an interpretation of the development and significance of a branch of economic thought that is still valid.

It was apparent to these early writers that a municipal corporation could not redistribute wealth because the mobility of its population provides the means for escape from the municipality's tax jurisdiction. The kind of redistributive benefits it can undertake are necessarily only those that the community agrees to pay for. We find that the prescriptions for public finance that are developed in

studies of the theory of government in a democratic society and which deal with the problems of inter-regional and inter-group equity are largely inapplicable at the municipal level.

APPENDIX H: Comments on Post-Keynesian Writing in "Public Finance"

We have already seen how Keynes inveighed against the operations of local government and its principles of "sound finance" with respect to the economic stabilization problem. The best that can be done is to use local government as a conduit in times of national economic deflation. A proposal to limit local activities during inflationary periods requires introduction of a control mechanism to ration credit and current outlays in a manner that can hardly be reconciled with the doctrine of local self-determination.

The difficulties faced by municipalities in providing a high level of general welfare services to the citizens of the metropolis (a situation also known as the metropolitan finance problem) are well understood by the students of intergovernmental fiscal relations. Their efforts to date, however, have largely been directed to studies of individual programs (such as education or transportation) and to studies of aggregations of municipalities.[2] We have felt that it was important to shed further light on the options available to a given municipality in the metropolitan system. This we do by considering the comprehensive budgetary constraints on a municipal general government which, each year, must strike a balance between its different revenue sources, its expenditures for all functions on both current and capital account, its borrowing capacity, and its expectations concerning its primary asset -- the property-tax base. Our

consideration of such comprehensive budgetary problems is found in:

APPENDIX I: An Approach to Economic Analysis of Municipal Debt Policies

The model developed in that study measures the effect of drift in municipal affairs in situations where expenditures are forced for political reasons to increase year by year but where the increases in tax and non-tax revenues are limited. In such cases, intergovernmental subsidies are essential, and borrowings can lead to disaster unless sufficient current revenue is available to cover the accrued interest and repayment of principal. The study is, therefore, concerned with methods of relating increases in property tax revenue to the debt burden and of estimating the amounts of intergovernmental revenues required.

B. Revolutionary applications of the "productivity" concept

It is a radical notion that municipalities should return to the fold, holding fast to the productivity rule as the path of salvation. Recall that the productivity of local public capital investment implied for the economists of the classic school, the creation of revenue-producing facilities exclusively.[3] Unless amply secured by the property taxes of the voters, unprofitable public enterprises and facilities primarily offering public services of the social welfare type (distinguished from the property-serving type) were to be avoided as "unproductive" for the individual local general government.

The notion is critical for the distinctions we make in this essay between the proper and unwise forms of municipal debt. The notion must be evaluated, and we attempt to do so qualitatively in this section by considering two dimensions of the question: the methods available to cities to acquire productive assets, and methods for financing nonproductive facilities.

1. Current methods of acquiring productive assets

The earlier chapters told how the primary productive investment opportunities for cities were allowed to slip into private hands, and there are evident ideological and fiscal problems in trying to renegotiate the existing franchises and recapture control of the "public" utilities now held in the private sector. Some feasible options are available, nevertheless, for the local government wishing to reinvigorate its sources of revenue:

(a)

Some utility franchises given at the turn of the Century for a term of years are presently up for renewal, providing an opportunity for obtaining compensation for the continued right to operate a monopoly. There may even be opportunities to engage in competition with the existing utilities by joining with other municipalities in constructing an atomic generator, distribution system, etc.[4]

(b)

There may be further opportunities for profit-making economic development projects, such as buildings on long leases to airlines, shipping companies, freight forwarders, parking garages, and even commercial and office tenants. The problem is to let such projects benefit the municipality directly, rather than indirectly through the use of an autonomous special district such as the Port of New York Authority.[5] The further problem is to avoid speculative ventures such as stadiums and concert hall, which fall into the category of the general welfare and which are notoriously poor as financial investments.[6]

(c)

Urban redevelopment land provides perhaps the single greatest opportunity for direct municipal benefit, but only if the benefits are in the form of tangible profits, with the return on investment to be discounted at the municipality's borrowing rate.[7] This policy, if not revolutionary, is at least heretical, for it appears to favor the non-social central-business-district and industrial-park type of redevelopment and to shunt aside the housing and other objectives of the program. Such is not necessarily so, however, as we go to some pains to show in the next section. More specifically on the revenue end: if welfare-type reuses are prescribed for the reclaimed land, the burden of subsidy could be borne by some higher level of government than the municipality. With regard to payments in lieu of taxes by local public housing authorities, for example, the payments should be comparable to real estate taxes on, say, upper-middle-income housing of the multiple dwelling variety, rather than pegged at historically low levels.[8] With regard to sales of land at low prices and offers of tax abatements to limited-profit or non-profit housing companies, it should be the objective of the municipality to acquire the land at the written-down price that is possible with federal assistance, to then sell the land at the highest possible price (or lease it at the highest possible rental), and to pass the burden of the subsidy to the higher levels of government who sponsor the housing program. Such a policy is comparable to the suggestion made by President Nixon that suburban communities be fully compensated for the extra service costs and

loss of taxes involved in the building of housing for low-income families in suburban communities.[9] The principle should be extended to municipal general governments across the board as they struggle with the urban housing problems of the nation.

In addition, under the productivity rule, the repair and maintenance of municipal assets should be looked upon as new investments, subject to the investment criteria sketched above. As example, rehabilitation of the municipal plant, including street and sewer repairs, must either (a) be paid for out of current receipts, (b) be shown to be essential for generating a discounted stream of future property taxes equal or greater than the investment, or (c) be subsidized by the federal or State governments.

2. Methods for financing nonproductive projects

The most basic of all the issues raised in the four chapters above is the systemwide lack of funds for the public facilities that people demand for their urban communities. Successful revolutionaries promise more bread, and the intergovernmental reformer must promise more and better public goods and services (and, in this case, not lower taxes, but equalized burdens); one cannot expect a local government to proclaim calmly the termination of all capital expenditures that are not guaranteed to make a profit for the city.

One can, however, contemplate a situation in which no more bonds need be sold by the municipal general government for such facilities as schools, hospitals, highways, housing and subways. This happy state of affairs could come about for a combination of possible reasons: passage of a reasonably adequate revenue-sharing bill, creation of State-wide building authorities that construct facilities for lease to local government agencies, and a development of a metric for identifying the productive component of any given public facility:

(a)

A revenue-sharing bill at the federal level and comparable legislation within each State are strong probabilities now, rather than remote possibilities. One of the prices to be paid for such a bill might be abandonment of local government's claim for tax exemption on municipal bond interest.[10] The major effect of taxation on municipal bonds is expected to be higher interest costs (although keeping tax exemption in a narrowing market also promises higher

rates). Revenue-sharing thus might simultaneously decrease the need to sell bonds and increase the cost of doing so. As a result, bond issues for truly productive projects might be even easier to sell than at the present time.

(b)

We discuss a few of the State building authorities already in existence in Chapter 8, for we consider this form of State enterprise both logical and effective. One might even speculate that long-term financing for such State authorities would be available from federal sources, thus further lightening the pressure on the market for local bonds.[11]

(c)

The metric for identifying the productive component of a given local public facility is the most problematic but also one of the most useful facets of our approach. It seems quite clear that property values are a function of the amenities of the environment, and these amenities include the usual range of good schools, transportation, and absence of pollution, etc. It seems equally clear that the taxpaying public is prepared to pay for some, but not all, of these amenities with the property tax dollars that continue to be the basic prop of municipal finance. This concordance of equity and desire provides some basis for the necessary metric, although a good deal more research is necessary to arrive at a formula that could be applied.

It is possible that the degree of productivity and the percentage of a grant-in-aid required as a matching contribution could be formally related. At the moment, however, as the ACIR notes, the size

of a matching contribution for a specific function may vary, depending upon the legislative history of the program and the particular federal department in charge.[12] For instance, under existing programs, ACIR finds that the federal contribution for water and sewer facilities can be as low as 30 per cent and as high as 90 per cent.

The establishment of a standard metric scale, moreover, would provide a means for setting rents on local facilities (such as schools) leased from non-local building authorities. It would be the means of defining the burden that a municipality, whether in the suburbs or in the central cities, should bear for providing land for low-rent housing.

Most important of all, with many major capital investments thus funded by higher levels of government for tenancy by local agencies, the larger part of municipal expenditures would be on current account, including lease payments and non-capitalized capital investment for maintenance and repair. Long-term borrowing by the municipal general government would not be eliminated but would be reserved for very special, i.e., very productive projects. The conclusion, to which much of the essay is now to be addressed, is that the idea of productivity does not necessarily imply a rejection of the need for nonproductive facilities under the management control of the local government.

Chapter 5

THE CITY'S ACTUAL SHARE OF FISCAL RESPONSIBILITY

A. The current pattern of expenditures by function

The gradual expansion of expenditures by the combination of State and local governments is a well documented story.[1] The subject of the disparities between suburbs and central cities has also been thoroughly explored.[2] Relatively little progress, however, has been made in heeding Mabel Walker's plea of some forty years ago for more accurate measures of inter-city differences.[3]

The expenditure data for 1966 prepared for the National Commission on Urban Problems (and found in Table 1) provide a uniquely revealing picture of sources of revenue by function by level of government. The expenditure totals do not include local government revenues or outlays on electric power, gas supply, transit systems or liquor stores.

The Commission found that the federal government contributed 2.5 per cent of total local government expenditures, while the States (to some extent passing on federal funds) contributed 29.2 per cent of the local sector budget.

ESTIMATED REVENUE RELATIONSHIPS OF LOCAL GOVERNMENT EXPENDITURES FOR VARIOUS FUNCTIONS: 1966

TABLE 1

(1)	(2)	(3)	(4)	(5)
	Percent contribution of various sources to financing for particular functions			Percent of all local expenditure, net of int'gov't revenue and user charge, for the United States.
	State and federal aid	Local benefited User charges	Local general resources	
1. Water supply.	0.0	77.9	22.1	2.0
2. Interest on general debt.	2.0	-	98.0	5.9
3. Fire protection.	2.0	-	98.0	4.5
4. General public buildings.	2.0	-	98.0	2.2
5. Gen. control & fin. admin.	2.8	-	97.2	6.4
6. Police protect'n & correct'n.	3.4	-	96.6	9.0
7. Parks and recreation.	2.0	14.7	83.2	3.0
8. Refuse coll'n & street cl'ng.	2.0	25.2	72.7	2.1
9. Sewerage.	6.8	45.8	47.4	2.7
10. Airports, terminals, parking	9.6	83.2	7.2	0.2
11. Health and hospitals.	11.6	36.1	52.3	5.3
12. Libraries.	12.0	-	88.0	1.3
13. Education.	43.5	6.4	50.1	43.5
14. Streets and highways.	43.9	6.7	49.4	7.0
15. Housing and urban renewal.	50.1	42.3	7.6	0.4
16. Public welfare.	81.2	-	18.8	2.3
All other				1.8
			Total	100.0

Source: Adapted from National Commission on Urban Problems, "Building The American City," Table 3, p. 410

In order to generate a typology of public goods and services for which cities have fiscal responsibility, we have ranked the sixteen reported functions of urban government in terms of the percentage of total budget contributed, in the name of the general welfare, by federal and State government (see Column 2, Table 1).

We find that no federal-State assistance was reported for water supply. Federal-State support becomes of some importance for sewerage, airport-terminals, parking, health and hospitals, and libraries. Such support becomes very important (over 40 per cent) for education, streets and highways, housing and urban renewal, and public welfare.

The typology of primary fiscal responsibilities of cities is represented by nine categories (functions number 1-8 plus 12 in the table):[4]

*Water supply
Interest on general debt
Fire protection
General public buildings
General control and administration
Police protection and correction
*Parks and recreation
*Refuse collection and street cleaning
Libraries

*User charges strongly represented in these categories.

Altogether these functions represent 36.4 per cent of local government general expenditures. Three of these functions are also financed by local benefitted-user charges: water supply, refuse collection, and parks-recreation.

User charges are particularly important for financing: sewerage, airports-terminals-parking, health and hospitals, and housing and urban renewal.

Column 5 indicates that only education absorbs a high percentage of the local budget, with expenditures for the other necessary functions well distributed. In the later chapters on policy, we shall argue that local governments should be relieved of more of their burden of these secondary expenditures by greater reliance on user charges and on federal-State programmatic assistance.

B. Detail of a representative city's expenditure pattern

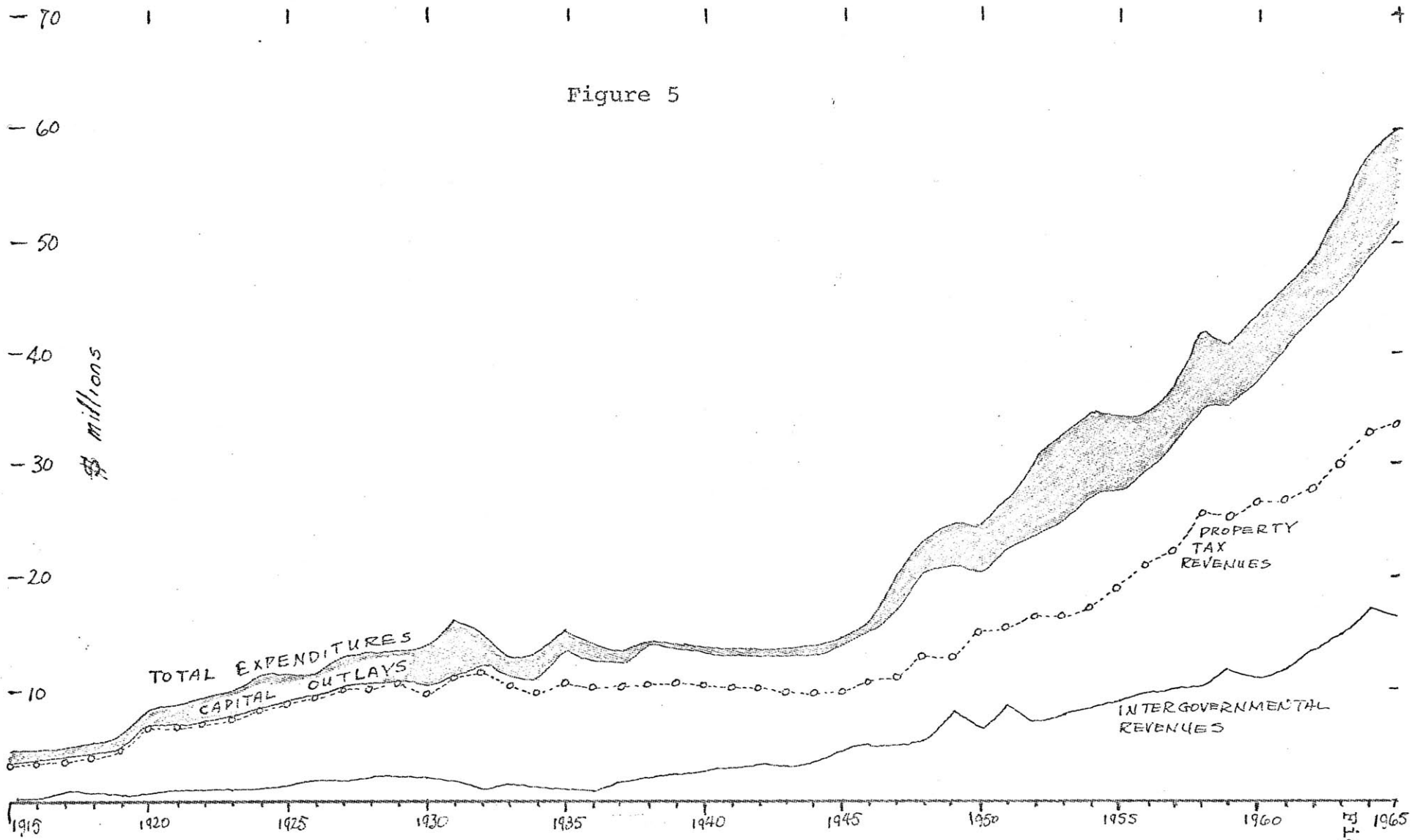
It is rare to find time-series data for a single city that illustrates the process of accretion in local public expenditures over the full span of 20th Century developments. Lack of such serial data has limited urban fiscal analysis to either cross-sectional studies of a given census or to temporal analysis of aggregated data for the State-local sector. One must be grateful to Whitelaw who spent seven months digging out the records for the City of Worcester, Massachusetts.[5]

His data are used below to provide a unique case history of the relationship between functions, current and capital outlays, and intergovernmental receipts. Although Worcester was chosen as representative, one must be aware that its expenditure pattern reflects the changing national mix of social policies, combined with local depreciation and general inflation, but it is a city that avoided the trauma of rapid population expansion found in other urban areas around the country, particularly in suburban communities. For whatever reasons, Worcester's bond rating was dropped from AAA to AA in the early 1960's by Moody's.[6]

Whitelaw's objective was to see if he could explain the level of Worcester's expenditures in terms of the need for maintenance and repair of plant, together with many other factors. Our objective here is to highlight the time periods during which specific functions were the focus of attention, and we have reworked his data for that purpose.

Figure 5 is familiar. It is a dutiful record of changing expenditure patterns between 1915 and 1965, growing through the

Figure 5



Revenues and Expenditures, City of Worcester, 1915-1965, by Year
(Whitelaw's Series)

Figure 5

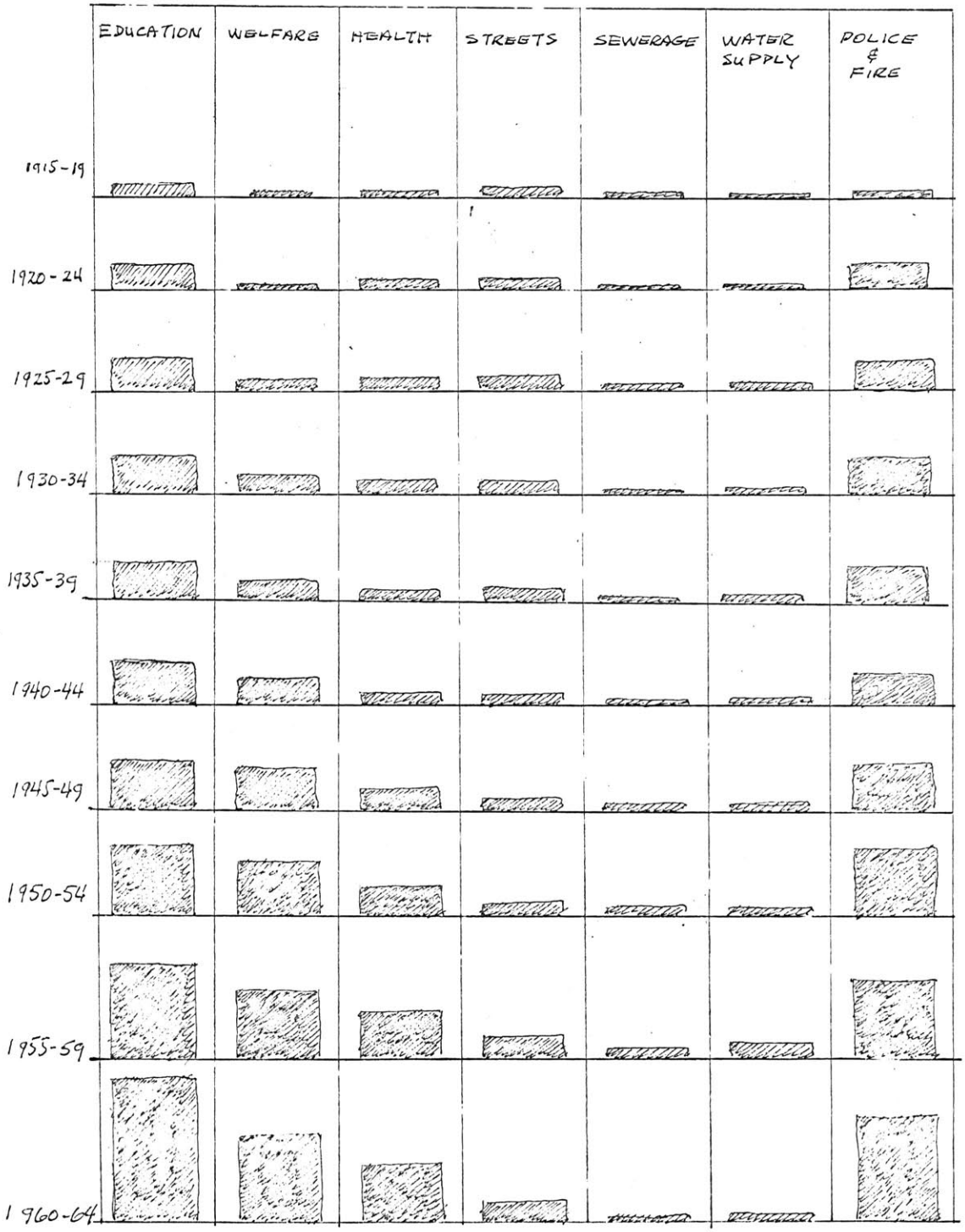
1920's, leveling off during the later 1930's and the War, and climbing steadily in the post war years. The data for capital outlays, revenues from property taxes and from intergovernmental sources follow that general scenario. Approximately the same curves appear when other cities, large and small, are the object of analysis.

The explanation of the curves is partly found in the record of expenditures by function in Figure 6 and in the values of the capital stock by function shown in Figure 7.

Figure 6 tells of the steady growth in expenditures for police and fire protection and the stability of current expenditures for streets, sewers and water supply over the half-century period. The cost of education services also grows steadily, reflecting the pay raises given to municipal employees after World War II rather than expansion in the school system itself. Welfare payments became significant after the Depression; health and hospital services take on new importance after the War, and, finally, the streets begin to need repair and upgrading beginning in the late 1950's.

Figure 7 is further explanation in terms of the value of the capital stock, in constant 1958 dollars, by function. A moderate increase in population and the number of school children required real net investment in school plant during the 1920's; the capital stock was allowed to age during the 1930's (in spite of federal assistance) until the higher standards for educational plant after the War made additional investment necessary. Capital invested in streets and sewerage facilities depreciates at a slower rate, in both physical and technological terms, than does school equipment, and thus a

Figure 6

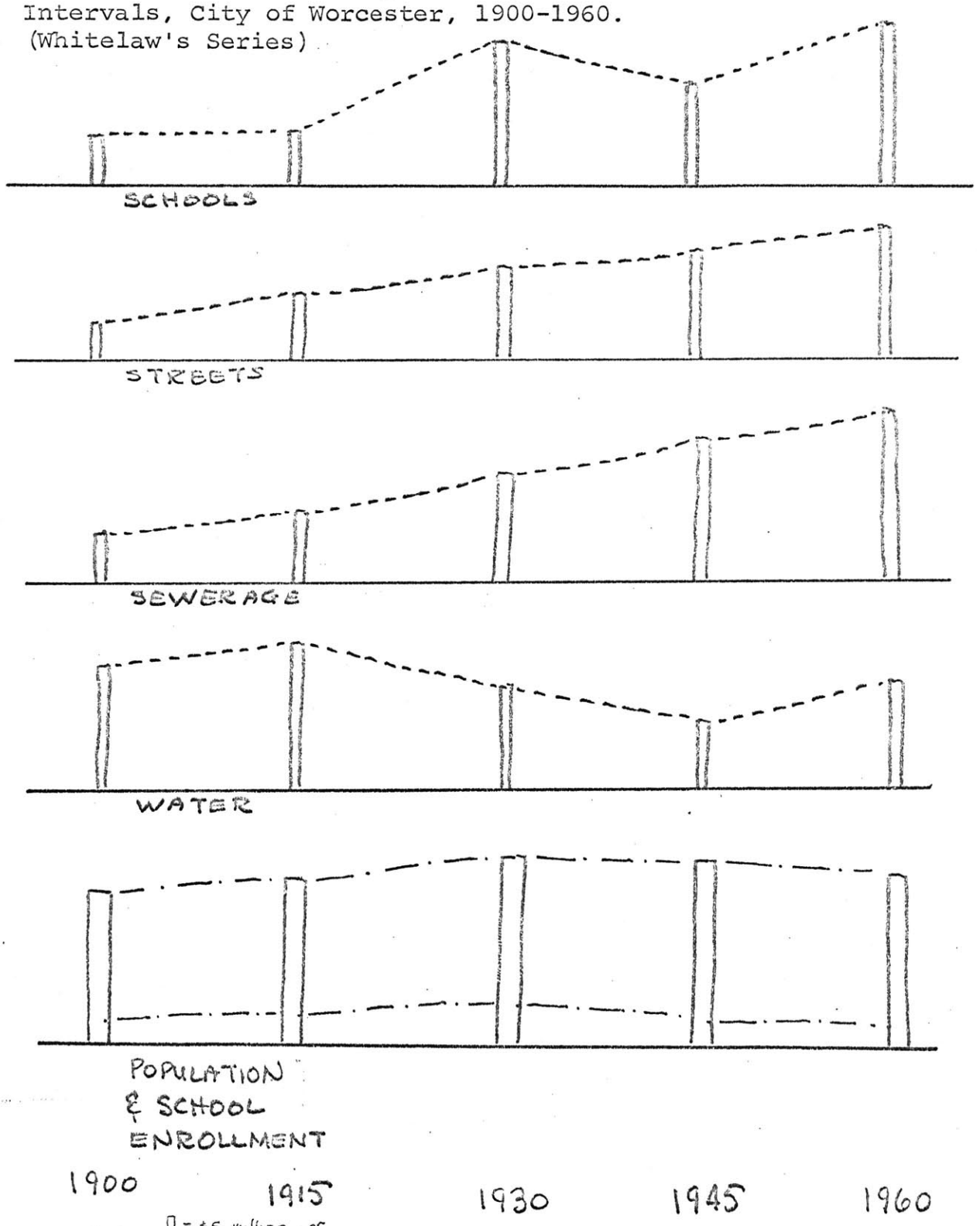


Growth of Social Welfare Expenditures, by Major Function, by 5-Year Periods, City of Worcester, 1915-1965 (Whitelaw's Series)

▭ = $10 million

Capital Value of Schools, Streets, Sewers, and Water Supply System, in Constant Dollars, with Total and School Population, at 15-Year Intervals, City of Worcester, 1900-1960. (Whitelaw's Series)

FIGURE 7



steady, if moderate, amount of capital outlay for those two functions produces a net real increment period by period to the value of the stock. The water supply system also was allowed to depreciate for decades after its original installation prior to World War I, but reconstruction after World War II became necessary, at higher real cost.

Chapter 6

ACTUAL AND EXPECTED USES OF TAX-EXEMPT SECURITIES

A. Productivity of the indebtedness of American cities

1. At the turn of the Century

Clark's 1916 dissertation covers the purposes of the indebtedness of all major American cities over the 32 year period 1880-1912.[1] It is a straightforward productivity analysis, based on the classic definition of "productivity" as investment in revenue-producing quasi-public projects.[2]

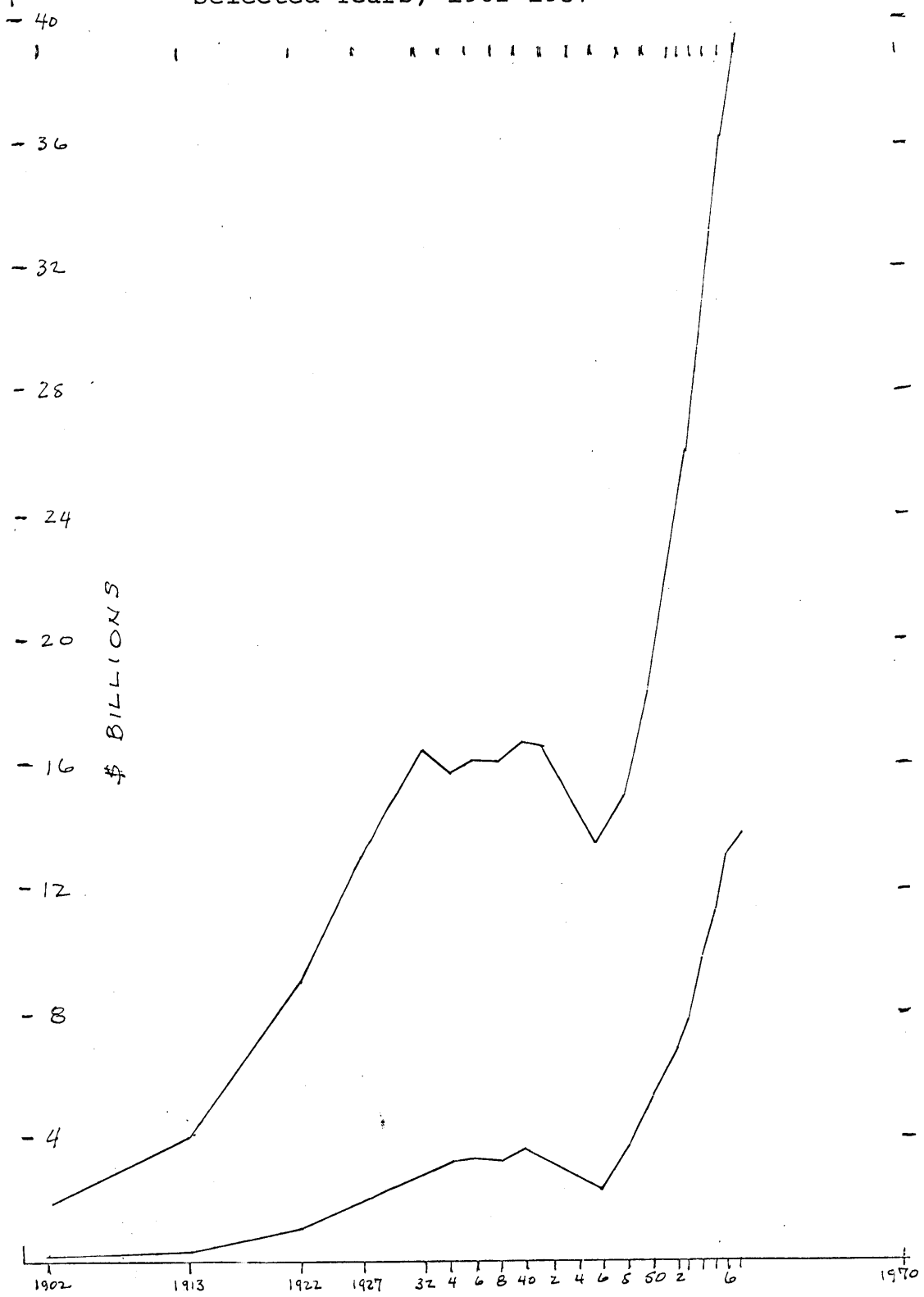
Throughout the period, nonproductive debt was predominant in the accounts of the cities in his enumeration, but productive debt during that blush of municipal socialism increased relatively faster than unproductive debt. Only the old canals and waterways category slumped, and railroad financings were banned.

Clark notes that capital outlays for education rose faster in the larger cities and in the northeast and West than in the South. It was the age of the City Beautiful, and parks (in the category of recreation) came into their own. The days of tolls for highways and bridges that spanned the metropolis had not yet returned, and the

need for infrastructure was a sufficient measure of productivity for the capital facility. So cities built bridges, highways and sewers almost as fast as schools. The fastest growing sector (protection) gave facilities to the newly-professionalized police and fire departments.

Productivity continued to be broadly defined as the supply of bonds responded to the pressure of urbanization and economic expansion over the following half-century. The growth of State and municipal debt between 1902 and 1957 is shown in Figure 8. Behind the chart is the story of bonds offered in the 1920's (largely to build facilities appropriate for the new automobile age), the decline of long-term issues during the Depression and World War II, and the post-war surge to accommodate a larger population, the airplane, the continuing expansion of the metropolises, and the shift of activities to the suburbs.

Total State and Local Debt Outstanding, Selected Years, 1902-1957 FIGURE 8



Source: U.S. Census

2. Defaults and data

No comprehensive records were kept until the mid-1950's to tell the more detailed story of how local governments put their bond-issuing capacity to work. Since 1957, the Investment Bankers Association of America has noted the details of each issue underwritten in the general and regional bond markets, and it is these data that have found their way into the ACIR reports, Senate hearings, and economic textbooks.[3]

Until the Depression, the volume of bonds issued was relatively small, and the bulk of it was in the form of general obligations, backed by the full faith and credit of the issuer. The few revenue bonds outstanding were largely secured by utilities that participated happily in the prosperity of the 1920's. On the whole, the default record of these and other bonds was good during the Depression:[4]

APPENDIX J: Footnote on the Default Record

The growth of revenue bonds, the establishment of special districts not connected with municipalities, and the expansion of the scope of public facilities, and the "metropolitan finance problem:" these are the factors that make it necessary to reevaluate the productivity of municipal general governments' borrowing. The new data are invaluable for that research.

B. Intimations of productivity in bond usage, 1957-1965

During the 1957-1965 period, State and local governments in the United States, taken together, spent $165 billion on education, $80 billion on highways, $38 billion on public welfare, and $166 billion for all other purposes.[5] Bond issues, as reported in the IBA data in Table 2, accounted for 15 per cent of the expenditures on education, 15 per cent of the expenditures on highways, 15 per cent of the expenditures on public welfare, and 20 per cent of the residual; altogether borrowed funds account for about one-sixth of expenditures in all categories.[6]

Table 2 shows that 18 per cent of all the bond issues sold during the 1957-65 period were sold by State governments, 35 per cent by city governments, another 18 per cent by school districts and the remaining 29 per cent by limited-function special districts.

Our perusal of the more detailed data on a State-by-State basis shows that the amounts of bonds sold for school and general purposes were especially high in the States with large urban populations. In the South, industrial revenue bond issues visibly contributed to the totals after 1960, while water and power issues in California and Washington were important factors in the West. It appears that very large and/or rapidly-growing States tended to sell proportionately more than would be expected merely on the basis of population. States with special programs, such as Washington for utility districts, appear as extremes above average, while the probable explanation for the opposite extreme is a low demand for public facilities, a combination of low fiscal capacity and modest aspirations for public services.

BONDS SOLD BY TYPE OF LOCAL GOVERNMENT
BY PURPOSE: 1957-1965

TABLE 2

(in billions of dollars)
(in percentages)

Type of issuer	Education	Transp'n	Utilities & Cons'v.	Social Welfare	Misc.	Refund-ings	TOTAL
State	$ 3.500	$ 3.400	$ .650	$ 1.000	$ 5.400	$ .300	$14.250
City	4.000	3.700	8.800	2.150	7.800	1.050	27.500
School Districts	13.600	-	-	-	-	.350	13.950
Special Districts	3.500	5.200	5.900	3.300	2.900	1.650	22.450
TOTAL	$24.600	$12.300	$ 15.350	$ 6.450	$16.100	$3.350	$78.150
State	15%	28%	4%	16%	34%	10%	18%
City	16	30	57	33	48	31	35
School Districts	55	-	-	-	-	10	18
Special Districts	14	42	39	51	18	49	29
TOTAL	100	100	100	100	100	100	100
State	25%	24%	5%	7 %	37%	2%	100%
City	14	13	32	8	28	5	100
School Districts	97	-	-	-	-	3	100
Special Districts	16	23	26	15	13	7	100
	31	16	20	8	21	4	100

Source: IBA and census data.

Of all the bonds sold by cities, 32 per cent financed utilities (which sometimes produce cash surpluses for municipal coffers) and 14 per cent financed school construction (a low productivity application of municipal credit). City education bonds represented only 16 per cent of all education bonds.

School districts marketed over half of the bonds for education, but, since most school districts levy local property taxes, the effect on municipal fiscal capacity is minimized.

If the State totals were higher for education and social welfare (an IBA category that includes low-rent housing as well as hospital) facilities, the school and special district, and city, totals could be commensurately lower.

For true productivity at the municipal level, the profit-making quasi-public function served by special districts in the transportation and utility fields would shift over to the city column, while unprofitable activities (such as mass transit companies in major cities) would be financed with State credit (possibly in the form of a guarantee of a special district's revenue bonds).[7]

In any case, States have been selling their general obligation bonds in greater amounts than their revenue bonds; cities also issue more general obligations than revenue bonds but both types have been increasing in amount; school district general obligation bonds have also been increasing, but use of revenue bonds by school districts is negligible, although some special districts sell such bonds for education purposes; the formidable increase in special district revenue bonds has been discussed elsewhere in this essay, but it is

important to note the increasing use of special district general obligation bonds.

The data published for the 1957-65 period do not show directly the distribution of general obligation and revenue bonds by purpose, but a comparison of Table 2 in the preceding section and the data for Figure 9 above suggest the following:

(a)

Bonds for education purposes tend to be general obligations of the issuer, except for a small but growing number of special district revenue situations.

(b)

Bonds for transportation purposes tend to be revenue issues when associated with income-producing improvements such as toll highways and airports but, depending upon the nature of the facility and the amount of federal or state aid available, are otherwise general obligations of the responsible government.

(c)

Bonds for social welfare purposes, even more than in the transportation field, are related to federal and State programs and are often allowed to be revenue bonds secured by rental payments (such as dormitory charges) and by contingent guarantees by State or federal agencies.

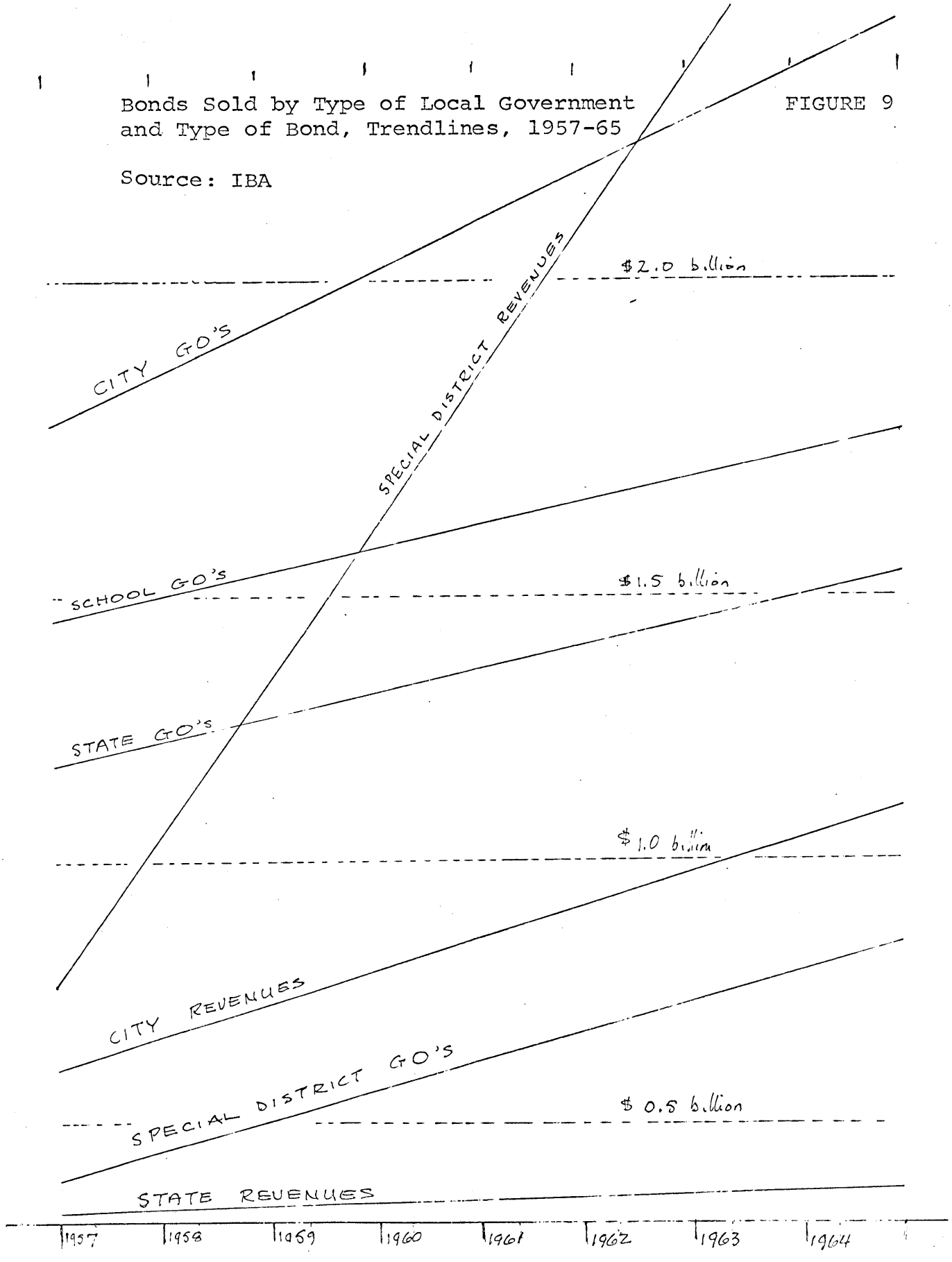
(d)

The types of bonds sold to finance utilities tend to reflect the profitability of the public enterprise, as seen in Table 3. The finances of city-owned utilities (Table 3), including water supply

Bonds Sold by Type of Local Government and Type of Bond, Trendlines, 1957-65

FIGURE 9

Source: IBA



FINANCES OF CITY-OWNED UTILITIES, BY TYPE: 1964-65 TABLE 3

	TOTAL	WATER SUPPLY SYSTEMS	ELECTRIC POWER SYSTEMS	TRANSIT SYSTEMS	GAS SUPPLY SYSTEMS
(millions of dollars)					
Revenues	$3,760	$1,651	$1,441	$453	$215
Current operating expenses	2,356	871	840	489	157
Gross margins	1,404	780	601	-36	58
Margin as % of revenues	37%	47%	42%	-8%	27%
Interest paid	$354	$207	$76	$65	6
"Times earned" (Margin ÷ Int)	3.8x	3.3x	7.9x	-	9.7x
Year's capital outlay as % of debt outstanding	12.5%	11.6%	15.8%	5.6%	21. %
Non-guaranteed debt as % of debt outstanding	55%	54%	99%	6%	83%
Revenues as % of debt outstanding	35%	26%	61%	23%	150%

Source: calculated from Table 4, p. 270, Municipal Year Book 1967

systems, electric power systems, transit systems, and gas supply systems, are importantly determined by market forces. The demand prices for electricity and gas exceed those for water supply and the benighted urban transit systems, with effects that can be anticipated in the reports: revenue is a smaller percentage of debt outstanding for transit compared to electric or gas utilities; these two profitable forms of enterprise (electric and gas) can issue non-guaranteed debt or pure revenue bonds where only a small percentage of transit debt can be issued in that form.

C. The expected role of debt to 1975

1. The Joint Economic Committee estimates

The demand for social capital of the sort typically supplied by the issuance of local public securities has already been estimated for the next decade in amounts quite possibly in excess of the market's capacity to furnish (see Table 4). In broad categories, as estimated by the Joint Economic Committee, the needs for public facilities add up to about $500 billion, of which amount one-third would be furnished by private or community organizations and two-thirds furnished by State and local governments, with approximately half of the local government sector's share of capital outlays to be represented by bond finance:[8]

APPENDIX K: Extent of Borrowing for Local Public Construction

While the nation is generally committed to this inventory of needs (which are largely but not exclusively concerned with metropolitan areas), there are numerous factors that might affect the total volume of construction and the reliance on bond financing. Among these are (a) the possibility that revenue-sharing programs will obviate part of the need to borrow; (b) the possibility that many of the projects will be rendered unnecessary or fundamentally altered by technological change; and (c) the probability that many of the projects will be voted down by citizens or indefinitely deferred by anxious budget makers.

The most significant omission from the list is an estimate of the need for housing and urban renewal expenditures, representing

ESTIMATED CAPITAL REQUIREMENTS, 1966-1975, FOR STATE AND LOCAL PUBLIC FACILITIES, BY MAJOR CATEGORIES AND SOURCE OF FUNDS.

TABLE 4

Group of facilities	Total for Nation	State-local sector	Private Sector	Percentage Distribution		
				Public		Private
	(1)	(2)	(3)	Cols 1÷2	Col 2	Col 3
	Billions of dollars			%	%	%
Transportation	$151.7	$141.1	$ 10.6	93%	43%	6%
Education	82.2	62.0	20.2	75	19	12
Water & Sewer	76.2	56.5	19.7	74	17	11
Recreational & Cult.	53.1	35.0	18.0	66	11	11
Health	43.5	13.1	30.4	30	4	18
Electric & gas	84.9	12.8	72.1	15	4	42
Other Public Bldgs.	7.5	7.3	0.2	97	2	0
TOTAL	$499.1	$327.8	$171.3	66%	100%	100%

Source: U.S. Congress Joint Economic Committee, Local Public Facility Needs and Financing, Vol. 1.

activities often financed by the sale of local public bonds but heavily dependent upon federal grants-in-aid, the political philosophies and disposable incomes of local populations, and other factors making it difficult to calculate the amount of public funds required. Less controversy appears to surround the social capital to be invested in the facilities enumerated in the table.

Certain generalizations are in order as one observes the role of non-public agencies in Table 4. Except with respect to electric and gas utilities (and other public buildings), when the amount involved is very large, the public's share is also relatively high. Moreover, as the prospect for surplus revenues increases, as would be the case for such health facilities as nursing homes and the electric-gas industries, the share of the estimated investment consigned to the non-governmental sector tends to increase. When rates for service can be set to generate profits (based on traditionally low-priced franchises for use of public rights-of-way), private capital is attracted for the bulk of the prospective outlay.

2. Trouble in the market for tax-exempts

Regardless of the need for capital outlays, one of the major problems for the future of intergovernmental fiscal balance is that the State-local sector's freedom to plan bond financings is limited by the willingness of the nation's investors to hold the volume of State and local securities offered.[9]

Only a small part of the investing public considers it advantageous to hold fixed-income tax-exempt securities: taxable institutions such as casualty insurance companies (in contrast to tax-sheltered life companies, savings banks, and pension funds), wealthy individuals and their surrogate trust companies, and commercial banks. During the post-war period the volume of new tax-exempt issues soared; the yields also rose to attract investors; the holdings of outstanding bonds declined in market value, causing further disaffection among investors; and rather special opportunities were available to commercial banks, who became the market's major investors after 1961. In the 1966-75 decade, according to studies by the Joint Economic Committee, the volume of State-local bonds outstanding may double from $100 to $200 billion, but rather excessive reliance is placed upon the commercial bank investors who are expected to absorb two-thirds of the new offerings. For a number of technical reasons, State and municipal securities without tax exemption would be less attractive to investors than comparable corporate securities, so that the possible removal of tax exemption would only aggravate an already tenuous balance between supply and demand. There are a number of troublesome disputes within the

industry over and above the running battles concerning the tax-exempt status of industrial revenue bonds and the Constitutional status of tax exemption itself; these concern the rating system and the conflicts between commercial and investment bankers.

In summary, the municipal fiscal administrator must recognize the scarcity of investors for State-local securities for the foreseeable future. With free access to the market at any time by any local government, capital rationing necessarily takes the form of voluntary withdrawal from the market by prospective local government borrowers. A combination of higher local taxes and service charges, together with revenue-sharing and subsidies from the federal government, will be required to provide the funds estimated as required for State and local public facilities in the coming decade in the not unlikely event that commercial bank investment will falter. The only alternative is diminution of the indicated supply of new issues by local forbearance from the market. There is some evidence and much opinion that the smaller issuers and the big-city issuers would be the ones most affected by capital rationing as imposed by the untrammeled operation of market forces.

The capital market underwriters and investors determine the form of bonds issued indirectly, by preferring issues with certain characteristics of security, purpose, term, and call provisions, and by establishing the corresponding interest rate or yield structure. The highly differentiated issuing government is free to accept or reject bids for the bonds but is ordinarily constrained by State laws that may prohibit the establishment of terms acceptable to the buyer.

We know in recent years that scores of issues have been withdrawn from bid because issuers were prevented from accepting interest rates above the maximum specified in State law. We cannot know, however, of all the bond issues that were stillborn, sometimes because of the market and sometimes because a municipality's credit had been used inappropriately and, hence, the marginal interest rate anticipated for the next financing was either politically, legally, or economically unacceptable. The true cost of capital for a corporation may be inferred from the price-earnings ratio of its common stock in association with the yields of its corporate bonds; the cost of capital for a municipality at the limits of its bonding capacity is manifestly higher than the yields of its outstanding bonds but by an unascertainable amount.

The nature of the market constraint is thus real but intangible. The situation in the market for tax exempt bonds promises to become worse during the present decade, as we interpret the evidence. The Joint Economic Committee studies also indicate: (a) that a federal guarantee would stifle the market for tax exempts even further, and (b) that removal of tax exemption would raise interest costs for State-local securities generally, and particularly for the marginal issuers.[10] Every market signal, therefore, suggests again the need for optimizing the productive use of municipal credit along the lines outlined in this essay, until such time as supplemental capital funds are available in quantity from the federal and State governments.

Chapter 7

INFLUENCE OF POLITICS ON THE FORM OF DEBT

A. The politics of local control

The reader knows that no concise constitutional document exists for the governance of local areas. From the day the States reserved the power to govern themselves and omitted any mention of the rights and obligations of lower levels of local government vis-a-vis the States, the struggle to define the proper functions of government and to allocate responsibilities and fiscal resources among the various levels has proceeded without abatement. One merely observes, in the midst of diverse experience, a consistent distaste for over-centralization at either the State or federal level and a willingness to risk the Balkanization of government in urban areas. When discussing the variable politics of local control as it affects the shape that revenue-sharing might take, even the pundits of the Advisory Commission on Intergovernmental Relations are forced to resort to such a general term as the "liberal view."

The "merits" and "shortcomings" of local control have long been debated by scholars around the world.[1] The controversy is manifest

currently in the debate about the method and speed of desegregating schools and in the search for a viable form of citizen participation in the Model Cities programs. The most profound example is in the proposal that the federal government agree to share its revenues with cities and State governments through bloc grants rather than centrally-administered programs of federal assistance. The politics of the nation will determine the outcome of revenue-sharing; the process by which voter support is obtained for specific bond issues is a microcosm of that struggle.

ACIR produced a staff analysis of six alternative ways of distributing a federal surplus shortly before the National Commission on Urban Affairs proposed a seventh, the first to deal specifically with the possibility of direct sharing with cities.[2] Five of the plans feature little or no federal involvement in State and local expenditure decisions; the sixth plan, an expansion of the present type of conditional grant-in-aid programs to finance specific functions, involves "considerable" intervention by the federal program administrators.

APPENDIX L: ACIR Staff Analysis of Six Revenue-Sharing Plans

"Liberals," says the ACIR, favor the conditional grant approach and could also be expected to support aggressive use of the "direct federal expenditure approach" so long as the purposes were for clearly defined social welfare categories. Liberal and conservative positions can also be identified with respect to the effect of the plans on the incidence of taxation within and among the several States and with respect to the effectiveness of the plans in helping

State and local governments provide services and balance budgets.

There is a real lack of evidence to support affirmations about which programs are truly best administered at the local level, and the admissibility of opposing views feeds the political flames. Is it really better to have teachers hired and fired by a local community, or would the system work as well if the teachers were salaried employees of the State government, and the local school board could exercise its discretion in selecting candidates from the pool. Is it really necessary to have each community design and build its own school buildings, or could the State implement the system of mass production of education facilities advocated by a California architect?[3] Is it really necessary for each community to market its own issues of tax-exempt bonds, or should each State establish a central marketing facility?[4] Each of the proposals for State action takes some measure of local autonomy away, and hence the ultimate judgments are political rather than economic.

The lesson in Chapter 5 is that education is the only category of local public expenditure that absorbs a major share of the urban government budget. The next largest single item is for police protection. From this situation it follows that a showing by an urban economist that scale economies are possible say, in refuse collection (2.1 per cent of the urban budget), may not produce significant enough savings to convince the voters to forego their ancient prerogatives.[5] The refuse collection system might be better managed at the regional level, but politics may require such a degree of local options as to scheduling that the estimated economies evaporate.

By the same token, we find widespread understanding of the diseconomies and spillover effects of uncoordinated transit and transportation systems combined with a firm resistance to the intrusion into local jurisdictions by area-wide planning and expenditure control authorities, with examples too numerous to mention. The lesson is that a contribution of municipal tax revenue to the support of an area-wide function suggests at least representation for the community whose money is being used and even a strong influence on area-wide management policy.

The political requirement for representation in the spending of one's own property taxes is purposefully obscured under these conditions: (a) when property taxes are assessed and collected by a county or other intermediate jurisdiction, or (b) when a non-elective governing board of a metropolitan-wide special district (such as those controlled by the State legislature in Massachusetts, including the Metropolitan District Commission or its Massachusetts Bay Transit Authority, both of which serve the Boston area) have the power to levy assessments on local communities.[6]

The politics of representation is displaced when a local activity is subsidized in whole or in major part by transfer of funds from State or federal government; the displacement is to the Legislative and executive branches of those governments, as revenues are raised by non-property taxes and as expenditure policy takes either the form of categorical programs for specific activities or disbursement of bloc grants.

The collective wisdom of our society, based on experience, is

that a categorical grant conditional upon a matching local contribution produces better results than an unrestricted grant for a specified purpose.[7] What the National Commission on Urban Problems proposes is a little of both conditional and unrestricted grants to be distributed to both the State and the municipal governments. The intended result is to put both levels of government in a better bargaining position without excessive specification of how public services should be managed within the State. It is the kind of political compromise that America likes when the subject matter is local government and the urban environment.

Perhaps there can never be a clear determination of the best method of managing a public service. Waterworks and electric power installations are capable of providing satisfaction in both private and public hands. There is a motion on the floor for a labor intensive activity, the postal system, to revert to private management, and some feeling that another form of labor intensive activity, health services, be nationalized. Political judgments are partly based on technological and economic criteria, but the desire for local management of public services is surely one of the stronger forces determining the shape of the federal system and the nature of municipal debt.

B. Consensus required for general obligation bonds

Proposition 1. A general obligation bond is evidence that a consensus exists concerning the public purpose for which it was issued

The matching of the "public purpose" of a capital outlay with the type and level of government has been an evolutionary process in American history, but, in every case where a general obligation bond has been issued, there has been a political consensus behind it, however temporary or undemocratic may have been the creation of such consensus at various periods. Many of the State laws on borrowing require an "extraordinary" (over 50 per cent) majority of voters to approve a bond issue.

In the early days of the Republic there was consensus that neither the States nor their political subdivisions should incur debt for local governmental facilities, which were ordinarily financed at that time by sales of local assets or contributions (and loans) by those to be benefitted. Only with the retreat of both the federal and State governments from the field and the exhaustion of local assets did the third tier of government under the federal system enter the borrowing market. The local electorates, in the hectic pre-Civil War decades, were willing to support "productive" income-growth projects (such as railroad building) which would benefit both themselves and their heirs. The frauds perpetrated by the Carpetbagger and machine politicians of the post-Civil War period represent an aberration in the democratic process.[9] The development of the notion that local governments should not lend their credit to private enterprisers ended the temporary consensus that obtained in the pre-Civil War

period and produced the general, if misguided, opinion that the proper use of general obligation bonds is for the construction of non-productive income-distribution projects such as schools (over and above the property-tax based set of local improvements). Taxpayer revolts that take the form of campaigns to defeat proposed bond issues under the more democratic and well-managed forms of municipal government in the 20th Century show how difficult it is in any community to gain the consensus required under State laws to issue a general obligation bond. The widespread rejection at the polls of proposals for metropolitan-wide government or authorities with general taxing powers indicates that there is little concurrence between suburban and center city populations concerning the extent of the responsibilities of local government. In the optimizing system outlined in Figure 10, communities are only expected to sell bonds for productive property-improving functions and other very local amenities, regardless of the extent of approval within the community of grander social objectives that are fiscally unproductive and which should be the fiscal responsibility of higher-level governments.

C. Productivity required for other bond types

Proposition 2. Limited obligation, special assessment, and revenue bonds are evidence that the public facility being financed offers benefits primarily to classes or groups with the willingness and ability to pay therefor.

Proposition 3. When quasi-market prices can be set on the services being financed, the type of bond offered (general obligation or revenue) depends upon the prospects for "profitable" operation.

Proposition 4. Some form of subsidy from a higher level of government is required before a local government will construct a facility offering social welfare services.

These three propositions will be considered together. The relation of special assessment bonds to the local property improvement spectrum is a simple proposition, but the content of the propositions becomes more complex as we shift into the area of overlapping private and public opportunities.

It was the localized liberal-conservative split that determined whether or not a specific community built its own utilities or enfranchised a willing privately-owned corporation to build and operate the local waterworks, electric or gas utility, or rapid transit line. Such facilities, when publicly owned, have been financed by both general obligation and revenue bonds.

Table 3 indicates that non-guaranteed (revenue) bonds are overwhelmingly the source of long-term funds for electric utilities owned by municipalities and represent about half the financing of those gas and waterworks that are publicly owned; what cannot be discerned from those data is the extent to which such non-guaranteed debt finances the less profitable utilities compared to those that are more profitable.

In any case, it is the opinion of this writer that general obligation debt is to be preferred for profitable utilities in the fiscal strategy of municipal general governments, providing more flexibility, possibly lower overall interest costs on the general obligations issued for all purposes by the municipality, and the promise of surplus revenues for general municipal purposes.[10]

The strands of the argument are brought together more vividly when the case of the unprofitable utility is considered, with rapid transit lines the most pervasive form of an unprofitable public enterprise with quasi-market prices. When transit first was built, a case could be made for use of either general obligation bond financing or revenue bond financing by the municipality as it played its role in developing its real property tax base. That day has passed, for it now appears that improvements to rapid transit systems tend to benefit suburban commuters rather more than either central city residents or the central city tax base, although the point is debatable. (Note 34).

In any case, so long as transit is provided by cities at a loss, with cities unable to maintain a market for transit services at prices that cover costs, and equally unable to institute some system of full-social-cost accounting into the combined road-transit network that serves the metropolis, the municipality encumbered with a rapid transit system is providing at its own expense an income-distributive social-welfare set of public services. Our logic of local fiscal balance suggests, in this case, that some form of subsidy is required and that general obligations should no longer be sold by the

municipality for its support; however, since the operation is unprofitable for the central city municipality, access to the market for revenue bonds is effectively closed without extensive guarantees that hypothecate the general credit of the municipality. Only to the extent that a municipality concludes that maintenance of the rapid transit system contributes to the stability of its property tax base can general obligation bonds be condoned by either logic or practice. It is thus that New York City assumed transit debt as its general obligation and has sold new debt in the form of subsidized and guaranteed transit authority obligations.[11] And it is thus that the citizens of Los Angeles rejected a proposed general obligation bond issue to construct a transit system for which there was no consensus regarding the ability of such a facility to augment the property tax base.[12]

Chapter 8

A NORMATIVE VIEW OF MUNICIPAL DEBT POLICY

A. Basis for the normalization of municipal debt policy

In this chapter, the many aspects of intergovernmental fiscal relations relating to municipal securities that have been discussed in the preceding pages are brought together to provide (1) a consistent perspective on the allocation of fiscal resources and operating responsibilities among local governments and (2) a basis for judging the utility of certain new forms of special district governments.[1]

The consistent perspective of which we speak is our interpretation of the interaction between the following fundamental characteristics of American local government: (1) the tendency for each level of government to have predominant access to specified sources of revenue; (2) the tendency for municipal governments to bear full fiscal responsibility for certain "primary" functions and for other governments to participate in the financing of all other functions; (3) the mixing of "productive" and "nonproductive" components in most

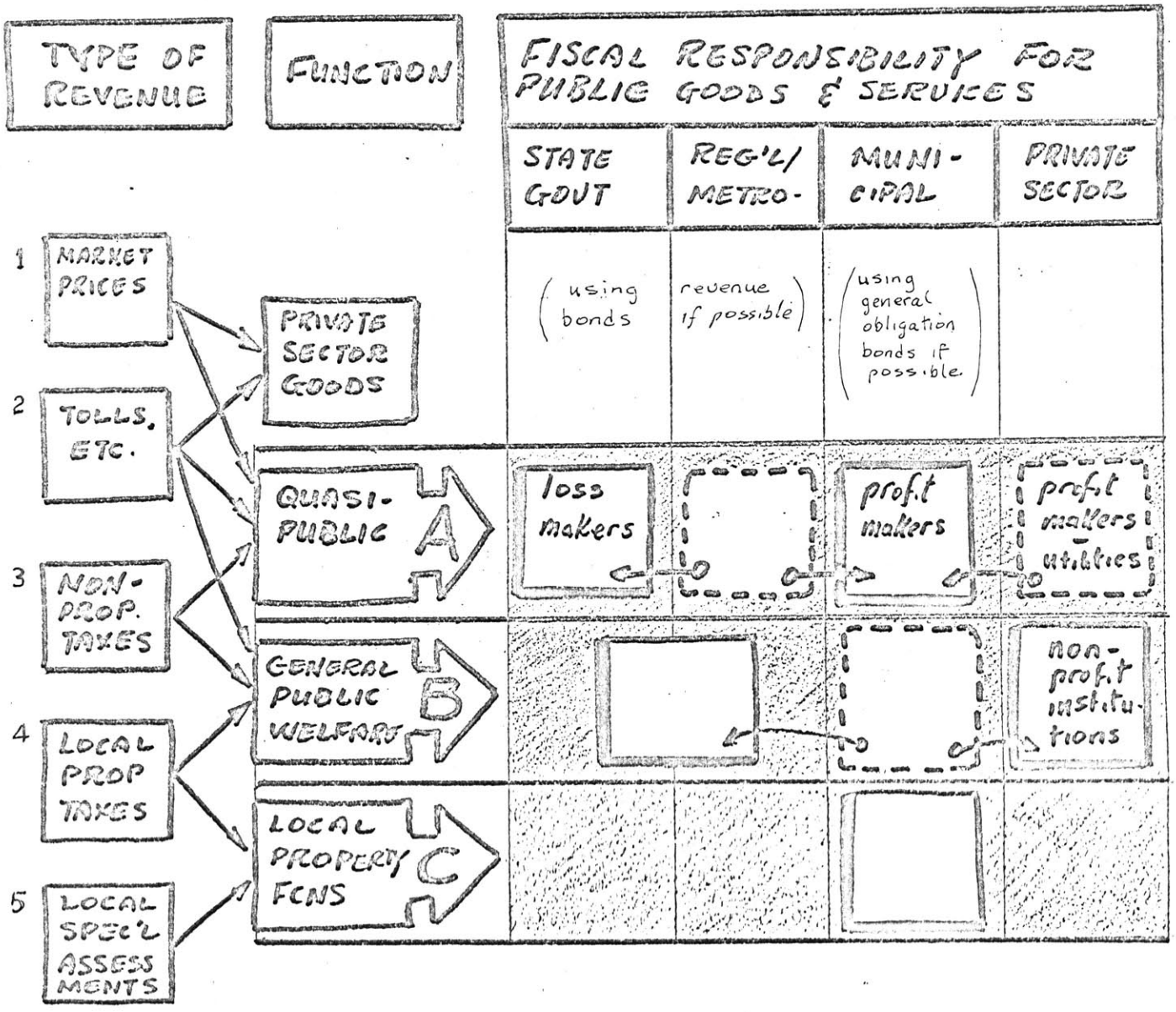
local government investments; (4) the suitability of revenue bond financing for activities that are productive for a larger jurisdiction than the municipality; and (5) the establishment of special district forms of government to provide more optimal (e.g. efficient and consensual) services for such larger jurisdictions.

The mix of functions, agencies, and techniques can be expected to vary from one place to another and yet produce equally satisfactory results. Each municipality, as a fiscal island under existing systems of local government, is entitled (within limits) to select and pay for its own high or low level of local public goods and services out of the tax resources designated for its use. Subsidies from higher levels of government and the use of area-wide special governments are then utilized to broaden and improve services, to equalize fiscal burdens, to minimize interjurisdictional imbalances in costs and benefits, and to raise minimal standards in specific low-capacity communities.

In Figure 10, we attempt to portray one mix of functions, agencies, and resource allocations that would be satisfactory for a municipal general government. It is a system that reflects the central tendencies and theories of American local government, and, to that extent, can be said to represent a normative basis for appraising the types of debt securities and types of governmental operations employed in a given locality.[2] In setting out this normative system, we have attempted to recognize (1) the political requirement for local self-government, (2) the fiscal requirement for enlarging opportunities for "productive" municipal investment and

FIGURE 10

Relationship of Revenue Sources, Public Function, Level of Local Government, and Type of Bond



for subsidizing the nonproductive component of the public services municipal governments offer, and (3) the possibility of obtaining greater efficiency and equity by use of subsidized special district governments.

The State-local sector in Figure 10 is shown to have available five forms of revenue (in addition to prospective transfers from the federal government): (1) net proceeds of the sale of assets or services for which there is a market price (such as electricity or liquor); (2) net revenues from services with approximations to market prices as a form of benefit taxation but with some component of social welfare, such as tolls on essential bridges; (3) non-property taxes of many kinds, including sales taxes, business franchise and corporate taxes, etc.; (4) ad valorem taxes on real and personal property; and (5) charges in the form of assessments for special benefits to property owners.

Four types of "public" agencies are available to assume responsibility for providing "public" goods and services: States; regional or metropolitan-wide organizations; municipal general governments; and private for profit and community non-profit organizations.[3] The boxes with solid lines indicate where fiscal responsibility should rest in order to enhance the productivity of municipal general governments; the boxes with dotted lines indicate where fiscal responsibility typically rests at the present time.

These five revenue sources are to be matched with the three main functions to be performed in the public sector:

TYPE (A) Quasi-public functions offering "public" goods and services which can command market prices as an approximation of benefits conferred;

TYPE (B) "Public" or general welfare functions such as schooling, transportation, low-rent housing, health and welfare services, all of which must be supported by taxation over and above service charges, if any; and

TYPE (C) Local services to property-owners, including local streets, police and fire protection, sewers, etc., equivalent to the "primary" functions identified in Table 1, Chapter 5.

B. Implications of a normalized system

Local property taxes and special assessments would be used primarily for the support of Type C local "primary" functions. Note that local property taxes are also used to support Type B functions, but it would be our hope that the metric for distinguishing between the productive and general welfare components of the expenditures for schools and other functions in Type B would serve to lighten the fiscal pressure on the municipal general governments.

Non-property taxes (including income taxes, business and excise taxes, etc.) would be devoted primarily to Type B public or general welfare functions but could also be used to subsidize Type A quasi-public functions. Note that fiscal responsibility for Type B functions is transferred from the municipal column to either the State/regional/metropolitan column or to the non-profit organizations in such fields as housing, general hospitals, and education.

Revenues from tolls and market prices would support Type A special-function activities, including utilities and toll roads. The State, with its access to non-property revenues would assume fiscal responsibility for unprofitable activities, such as urban rapid transit and anti-pollution facilities. Private corporations with profitable "public" utilities and profit-making toll roads should be required to pay fair compensation to the municipalities for the right to do business as a monopoly.

To the extent that capital outlays required bond financing, municipal general governments will be encouraged to issue only general obligations, even for revenue-producing projects; the

objective here is to improve their ability to attract bids at reasonable interest rates from the capital market, and the shift of fiscal responsibility for nonproductive functions from these municipal governments to other governmental agencies would presumably increase the general governments' ability to obtain consensus in the form of bond approvals for the bonds that they would still wish to sell.

Revenue bonds, on the other hand, would be reserved for non-general governments and used primarily for the support of Type A and B functions. These revenue bonds could be subsidized further and guaranteed, where necessary, by State and federal agencies. The profit-making quasi-public Type A activities and the local property tax revenues would, ideally, be shunted away from Type A and B functions and placed at the disposal of municipal general governments.

C. Designating roles for new forms of debt-issuing special governments

1. A new typology of special districts

The theory of fiscal balance developed in the preceding section assumes that no fundamental changes are forthcoming in the basic allocation of revenue sources among governments (with most income taxes to the federal government, property taxes to local government, etc.) and, further, that bloc and programmatic grants to local governments continue to be inadequate.

There thus remains the possibility of financing "Type B" current and capital expenditures (covering social welfare functions) through some instrumentality other than the lowest level of municipal general government. However, municipal general governments still will be expected to share in the fiscal burden of welfare-type projects, in accordance with the measurement of productivity described in Chapter 4 and as discussed in the last Chapter in the context of proposals for bloc and programmatic grants-in-aid. (And, of course, nothing prevents a community with unused fiscal capacity from raising its tax rates to supply funds for the level of public services its citizens will vote for.)

The two forms of governmental unit that have been proposed as candidates are special districts (without taxing powers) and county-wide (or metropolitan) general governments (with taxing powers). In some areas of the country, the county can serve effectively, but most public administrators no longer expect that multi-county or metropolitan-wide general governments can be made acceptable to the electorates.[4] Our attention therefore is directed to special-function

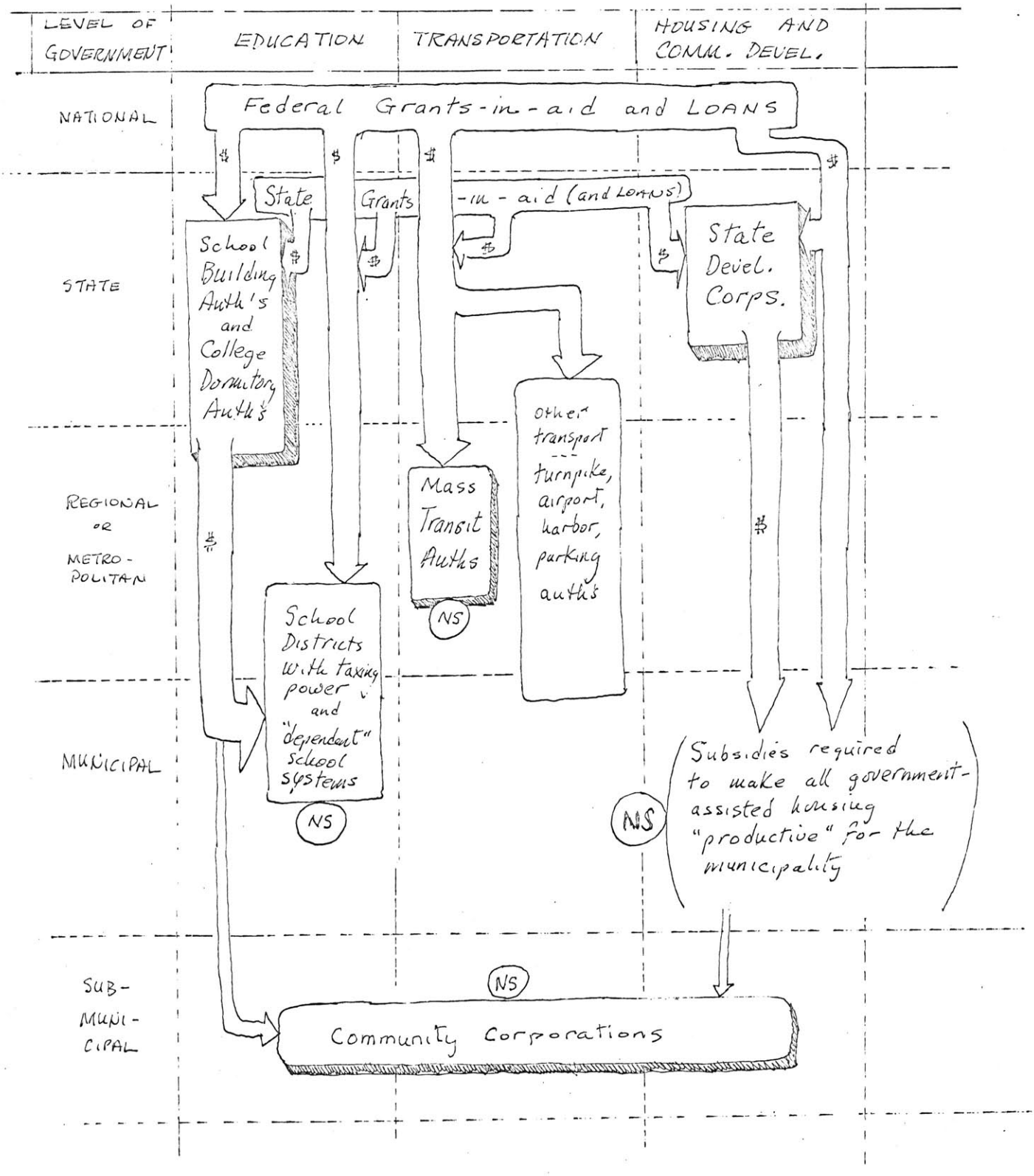
governments and to the particular roles that new forms can play in lifting the burden of social welfare functions off the shoulders of property-tax payers.

The rapid growth of special districts in the post-war period has been viewed as a danger to representative government, as a threat to local autonomy, as a new element of complexity in intergovernmental relations, and as the solution to many problems of efficiency, equity (both in terms of income distribution and compensation for interjurisdictional externalities), metropolitan coordination, and fiscal limitations. We view the special district here as a means of obtaining facilities for social welfare activities at the local level in order to transfer the financing burden from municipal general governments. At the optimum, this new form of special-function governments will issue only revenue bonds secured by leases from municipalities and by guarantees of State governments, reserving general obligations for municipalities. In some cases, it might be possible for municipalities to acquire profitable quasi-public ventures now in the hands of special districts and to slough off unprofitable operations (such as mass transit) for incorporation into such new special districts.

Our typology of new and useful forms of special districts is illustrated in Figure 11 with respect to three functional areas: education, transportation, and housing-community development. The principles represented there apply across the range of social welfare functions. In Figure 11, the new forms of special districts are heavily outlined. The white arrows indicate the proper flow of

FIGURE 11

Intergovernmental Fiscal Relationships for New Forms of Special District Governments



subsidy from one level of government to a new special district (with a continuation of the white arrow indicating that the subsidy is passed on. A circled "NS" (signifying no-subsidy) suggests the present existence of financial support from municipal governments that should be eliminated when the Type B welfare functions are properly refinanced. A dotted line indicates the possibility of subsidy at some future time.

2. Education facilities

Capital facilities for education at the primary and secondary school level have ordinarily been constructed by municipalities and school districts (coterminous or regional), all with taxing power. The logic of our argument is that funds for school and public higher education facilities should come from federal or State sources, or, if such facilities are built by local property tax revenues, the taxes should be imposed by a regional or metropolitan entity. Schools were built by federal funds in the days of the Works Progress Administration, and there is still inherent justification for federal subsidies and grants.

A Statewide school building and college dormitory authority is shown in Figure 11. Several States, such as Georgia and Pennsylvania, undertake the bond financing required for local area school facilities, ordinarily leasing the facility to the community whose fiscal liability is then a current rather than a capital expenditure.[5] Comparable financings for independent and parochial schools are a possible extension of this approach; dormitories and other facilities for persons rather than for instruction are currently available under federal and State mortgage assistance and bond purchase programs. At the optimum, education facilities would be paid for by federal-State and private sources, not by municipal general governments. Maintenance and operation of the facilities would be by agreement, presumably vesting responsibility in local hands.

3. Transportation facilities

Capital facilities for transportation media serving the metropolis are more difficult to handle, for the unprofitable mass transit ventures should be financed by the public at large (particularly by operators of private automobiles), while intra-city revenue-producing ventures (if any) would be happy additions to the municipal fisc. We show in Figure 11 a subsidized mass transit authority, and potentially self-financing authorities for other transportation facilities. Valid arguments, dating from the 19th Century, support a contemporary federal and State role in the financing of "internal improvements" as presently defined in the field of both inter-city and intra-metropolitan transportation. A start has been made, not only in terms of federal subsidies, but also in terms of State agencies selling bonds, similar to equipment trust certificates, with the proceeds purchasing rolling stock for lease to municipal systems (as in New York), but the process should go much further than is usually contemplated.[6] Maintenance and operation of the facility would most likely be vested in the transportation authority, with some representatives of the municipality on the governing board.

4. Housing

Subsidized housing and urban renewal generally are quantitatively and qualitatively of fundamental concern in the process of rationalizing the fiscal structure of American federalism. The concern of the State is people and it should be prepared to subsidize housing as necessary. The concern of the municipal corporation is, for unfortunate technical reasons, primarily its own fiscal equilibrium; the municipality wants to have its slums removed and its supply of good housing augmented by private builders. It needs property taxes or payments in lieu thereof to justify its contributions to those programs.[7]

The local fiscal situation is endangered by tax abatements and hidden subsidies to housing that is not in a full tax-paying status; such worthwhile activities should be subsidized (including payments, in lieu of taxes, if necessary) by State or federal sources rather than by the municipality. The capital costs of low-rent public housing projects are largely covered by municipal bonds guaranteed (to all intents and purposes) by the federal government; the principle can be extended to other housing types, but most housing is now subsidized indirectly. The real risk is that municipal general governments will be offering important and continuing subsidies to private builders of moderate-rental housing under a variety of federal and State programs without receiving fair compensation in the form of property taxes for their contributions to social welfare. Figure 11 shows subsidies in lieu of taxes coming to municipalities as such compensation.

5. Development corporations

Housing and community development can also be handled by a State-wide development corporation, such as the New York State Urban Development Corporation. The concept is fiscally sound. Its operations can be financed by any combination of public and private sources, and it is empowered to issue "public" (i.e., exempt from federal or State taxes) bonds that are not general obligations of either the State or any of its subdivisions.[8] Housing subsidies and urban redevelopment can both be financed through a State urban development corporation and make an attractive package for municipal officials concerned with their fiscal situation, if payments are made in lieu of taxes and if the operation of the urban development corporation is in tandem with the planning efforts of the locality. These conditions are not easy to satisfy, however, as the initial conversations between the mayor of New York City and the director of the New York State Development Corporation show.

6. Community corporations

Intra-city neighborhood-scale corporations can be set up under Model Cities or other legislation to be conduits for Type B social welfare functions, as well as to give the residents a sense of self-directed achievement.[9] From the perspective of fiscal balance rather than operational or ideological positions, these sub-municipal agencies can be neutral as private real estate ventures if included in the program of subsidy is a payment to the municipality for property services rendered. As shown in Figure 11, they are subject to the same conditions as noted for statewide development corporations.

7. New communities

New communities come, or will come, in many sizes and configurations (and are not seen in Figure 11).[10] If set up as new general governments, the rules of "sound" finance and non-social-welfare budgeting will apply to them as to the older cities. If set up as unincorporated sections of counties (viz., Reston, Virginia), the new community is not conceptually different from any other large-scale real estate development, and the literature concerning the true cost of municipal facilities supplied to the development will be applicable.[11] Appropriately-scaled property taxes will have to be remitted to the nearest local general government to maintain the latter's fiscal balance.

Two important forms of new communities that have recourse to municipal bond financing are of special interest. The first is the community with independent status as a municipal corporation but run by a developer corporation that sells bonds to finance the construction of infrastructure for future growth: Clearwater, Texas, and Foster City, California, are examples.[12] The second type is the community whose developer can sell bonds that will be purchased or guaranteed by the federal government under current legislation.[13]

Chapter 9

SYNTHESIS AND GUIDELINES

A. Synthesis

We have been evaluating the context for municipal debt policy in terms of a 19th Century thesis of continuing but limited validity, the productivity principle for local public investment, with its specification that the expectation of cash receipts sooner or later is the primary criterion justifying debt. The antithesis is the 20th Century mandate for local governments to provide and manage a much wider range of public goods and services. That mandate, however, requires expenditures that are (a) beyond the fiscal capacities of municipal general governments and (b) only partly "productive" in the classic sense.

The synthesis is the system by which intergovernmental fiscal resources are provided to the local governments charged with the responsibility for providing public goods and services. That the present synthesis is inadequate is attested by many reports on fiscal imbalance in the American federal system. The synthesis that

will be developed for the latter decades of the 20th Century will be the context for municipal bond financings in the future. In our opinion, the method by which capital facilities are to be acquired by local governments deserves more attention than it ordinarily receives in proposals for new forms of synthesis.

B. Economic and fiscal guidelines

We have seen that municipal debt policy is an integral part of a complex economic and fiscal structure of intergovernmental relations. That structure rests on a foundation of political philosophy, and we have come to expect a large quantum of diversity and inefficiency as the price we pay for our heritage of local self-government. Our syntheses, past and present, evolve as resolutions of differences between local and more central governments, between liberals and conservatives, between those with a capacity to pay and those receiving benefits, and between demagogues and saints.

The productivity principle itself was transmuted during the 20th Century into a national consensus to provide resources for the many social welfare activities that generate greater national and individual productivity, more equitable distribution of benefits, and savings in real costs. Our view that the social welfare function is only partly productive for the individual municipal general government has led directly to the suggestion that a metric that clearly distinguishes, program by program, between local and general components of productivity would be useful as a basis for calculating grants-in-aid.

We have also felt it is useful to begin laying the foundation for a more optimal allocation of fiscal and debt resources in the federal system, given the mixed bag of functions to be performed by local government, with each function itself a mixture of local and general productivity.

A truly optimum system would satisfy the rule that an extra

expenditure for a given public good should return equivalent benefits for those supplying the revenues. The well-known findings that small local fiscal jurisdictions generate interjurisdictional externalities and that economic disparities are found in all metropolises show that the present system is far from optimal.[1]

To discharge their responsibility for general-welfare productivity and to compensate for the fiscal constraints on local governments, the federal and State governments have found many ways to pass fiscal resources down to the local level where operating responsibility is to be located. Under the prospective new synthesis, bloc grants from the federal to the State and local governments, and from the State governments to local governments, will ameliorate the pressure on communities with low fiscal capacity and may even raise the aspiration level of segments of the population within those communities. Programmatic grants-in-aid, backed with minimum standards and mandatory matching contributions, would help in the effort to deliver public goods and services to regions and populations hitherto unable or unwilling to provide them out of their own resources.

In this future, a wealthy community may be even less constrained by archaic restrictions on borrowing and taxing its own citizens to provide the level of public services they demand, but, hopefully, such wealthy communities will also be forced to pay for the benefits they receive from expenditures made by nearby communities and to contribute their proportion of extra revenues for the general upgrading of the urban environment.

There are a variety of methods by which local public construction

can be financed and managed by -- or in behalf of -- local units of government, but some of them are currently dependent upon the operation of the municipal bond market, whose function must be redefined in the midst of fundamental structural changes resulting from the operation of the tax laws and the growth of the local public sector as the whole economy expands.

The substantial probability is that the market will be able to absorb a relatively smaller volume of new State-local securities and will have to impose a relatively higher rate of interest than at present. The chance is probably slim that there will be involuntary rationing of local government credit, for this violates the principles of local self-determination, but the market constraint suggests the need for exceptional care in the application of bonding capacity by the individual local governments. Before further comment on rational, efficient, or optimal guidelines for municipal bonds, however, a word is in order on the amenability of intergovernmental fiscal relations, including the debt function, to systems analysis.

The concept of suboptimality is implicit in the notion of synthesis. The logicians of the space age (accustomed to simple goals such as "more bang for a buck" with no limits on the budget) have been looking for optimizing solutions in the management of local investment (broadly defined) through use of the systems analysis or PPBS techniques, but they have found that analysis of even a single function (such as health care, or bus scheduling, or municipal debt finance) breaks down when confronted with such incommensurate values as the maintenance of individual liberty and the desire for order

and efficiency. As one analyst wrote:

> In the application of operational research we are on the safest ground when the analysis is limited to problems in the small, that is, the choice of alternative projects or ways to solve a specific problem such as designing a subway system in the context of a given environment or provision of hospital care in a specific area. This is called sub-optimizing since higher level problems can be reasonably ignored. But with the extension of programming systems to a wide variety of government programs all at the same time, there is a need to consider total expenditure levels in an urban area and also to consider the trade-offs among major programs such as health, education, transportation, and housing. It will simply not do to assume that the design of major programs in any one area is unaffected by what is done in other areas. For any given urban area the total resources available for all programs are not only limited but changes in any one of them vitally and immediately affect the others.[2]

Thus the economic and fiscal guidelines for local governments will continue to be suboptimizing solutions, but we still feel that constructive results can emerge through more explicit consideration of the tradeoffs between borrowings, taxes, intergovernmental revenues, and expenditures on capital and current account in the context of "total expenditure levels," along the lines exemplified in our Appendix E.

To be sure, there are many tradeoffs of a different sort to be made between major programs in allocating the capital and operating budget, but the game of suboptimizing at the level of the municipal general government really begins, in our opinion, when the level of local services demanded cannot be financed by further local tax increases or borrowings. At that point, local choices are further distorted by the selection of programs that maximize grants-in-aid

and minimize local matching contributions and operating costs and by creation of special governments able to operate beyond the local restrictions on borrowing and taxation.

C. Suboptimizing with special districts

Many of the attempts to create viable special-purpose governments have provided admirable sub-optimal solutions to the problem of bringing efficiency, fiscal equalization, and compensation for interjurisdictional externalities to the metropolis.

The success of a special-district approach to suboptimality cannot please everyone, and each experiment in the art of making special districts has critics with different sets of values and objectives. For instance, some argue that the Metropolitan District Commission (which controls parkland, expressways, and trunk sewers for the Boston area) should be freed from control by the State legislature, should have larger State subsidies, should employ a different formula to assess municipalities within its jurisdiction, and should expand its functions.

Similarly, critics argue that the Port of New York Authority should be run by elected officials, should undertake unprofitable ventures such as mass transit, should reduce tolls on bridges already paid for, and should not build office buildings in competition with the private market, but even these critics admit that the Port of New York Authority has been a successful pioneer in the creation of a mix of productive public projects of varying degrees of profitability.

We have suggested that municipalities attempt to obtain greater fiscal benefits directly from the productive activities of special districts operating within their jurisdiction, to the extent that such benefits are attributable to the agglomeration effect of the

local economic base and can be measured in terms of taxes or franchise payments on utilities and other profitable enterprises of a public nature. Let it be noted that there are those who disagree strenuously with the notion that "public" utilities in private ownership should have to pay municipal taxes, for they see this as a regressive tax that raises the cost of the service. What they forget is the dire financial plight of the municipal corporation. However, the amount of taxes or increased charges on utilities that are foregone can serve as the basis for specific bloc grants to be made by metropolitan-wide or higher levels of government as part of the effort to equalize fiscal burdens in the metropolis and in the intergovernmental fiscal system as a whole.

We have also suggested roles for subsidized special districts in the financing of "non-productive" facilities. This policy is unquestioned for activities with large "spillover" effects such as pollution control, where a State agency disburses its own (and federal) funds and the municipality coordinates efforts within its own jurisdiction. The policy has been applied to such other public facilities as education and housing in many States and could be adopted generally. As this is written, Mayor Lindsay in New York has proposed this solution for the City's hospitals, a development that should be observed as a model for other functions and other communities.[3]

The building authorities discussed in Chapter 8 were all State-wide in jurisdiction. The technique of the subsidized special district is also highly appropriate at the metropolitan level (and

occasionally at the municipal level, e.g. the case of New York City above). Such a metropolitan special district would satisfy the requirement for spreading the costs and benefits of the function over the relevant population, in effect minimizing inherent interjurisdictional externalities. Operational control could remain decentralized, although higher standards of coordination and service would be expected. Financing might even be intra-metropolitan in scope, based upon differential charges for services to communities in proportion to their varying fiscal capacities and tax efforts; if revenue bond financing was required, the bonds might be contingently guaranteed by the participating communities; subsidies from the federal and State governments would always be welcome.

D. Further reflections on municipal debt/intergovernmental fiscal relations

The notion of productivity is only part of the theory of municipal borrowing. Municipal borrowing is only part of the larger topic of State-local indebtedness, which increased from $24 billion outstanding in 1950 to over $110 billion outstanding at the end of 1968. State-local indebtedness, however, is only one of many choices for the financing of local public goods and services; of far greater significance, as the ultimate source of debt service, are the level and incidence of taxes in the American federal system. Even at this level, however, the financing of the public sector, for a nation as well-to-do as the United States, is subordinate to the less trivial matter of how the nation chooses to allocate its human and natural resources in pursuit of higher goals.

The systematic look at the municipal debt function, rather than being the tail that wags the dog, is, as it has turned out, a way of developing perspective on the choices available to us for an improved set of intergovernmental fiscal relations.

The Joint Economic Committee, taking the view that the basic system of federal, State and local responsibilities and resources would not be changed in essence in this decade, estimated that the volume of State-local bonds outstanding would amount to $200 billion by 1975. As noted, we have serious doubts about the ability of the market to digest this increment at interest rates sufficiently attractive to local governments, and our doubts have led ineluctably to the speculation that bonds will no longer need

to be sold at all or will be sold by non-municipal governments.

Suggestions have been made, for instance, that the States should be the only local governments to issue debt. The proceeds would be distributed to minor civil divisions according to the system mandated by the legislature, after it resolved the issue of local self-government within the State for the next era. That States have the power to change the rules of local government is unquestioned, although in many instances changes in the individual State's constitution might be necessary.

The federal government is also in a position to change the method by which municipalities obtain capital funds by issuing debt securities. Under a number of different programs administered by federal departments (including HUD, HEW, Agriculture, and Interior), bonds for public improvements can be underwritten at submarket rates of interest.[4] The amounts to date are relatively small, compared to the volume of State-local bonds issued through the capital markets (including public housing bonds), but the principle of federal underwriting is conceptually as important as that of federal grants-in-aid, especially if the demand for State and local bonds evaporates with loss of tax exemption and inability of communities to issue bonds at yields the market will accept. The federal government would be invaluable as an underwriter, in such circumstances, for special district bonds of the type to be issued by the New York Urban Development Corporation. Federal pre-eminence in the field of municipal borrowing is made possible through Congressional action and by manipulation of the tax code

and the banking regulations; its activities as underwriter could be neatly related to the economic stabilization policy of the nation and to the system of grants-in-aid to be established for sharing of federal revenues with the State and local government sector.

Such speculations focus attention on the extent to which decentralization and disintegration of the concept of the local general government are to proceed in the next few decades. In short, the question is whether the city itself as an organic whole has a future, not whether it can sell municipal bonds approved by the voter. We can imagine a system of local government within a State that is composed of community corporations to institutionalize neighborhood matters and a whole complex of single- or multi-functional special districts, each one optimizing some public function: one district for health services, another for education, one for fire and police protection, another for transportation by all media, another for land development and sewers, etc., all coordinated by a kind of metropolitan-scale or regional planning-programming-and-budget-systems (computerized) control center, which in turn coordinates operations with related centers and with higher government.

Perhaps the critical question is whether citizens would feel satisfied to have their instinct for local self-government discharged by direct participation in the community corporation and by exercising their franchise in regional and State-wide electioneering. Perhaps the primary schools and the local police and fire station could be subject to veto or even managed at the community level, as a further inducement to allow government in the urban area to be

rationalized. In any event, one cannot be so sure that the city as a corporate entity with general responsibility for public goods and services will survive the next generation; its demise would have evident effects on the nature and purpose of local government finance and debt.

In the more likely event that the existing structure of State and local government will not be so drastically overhauled, however, municipal general governments will still have the right to borrow within the limits imposed by State constitutional and statutory restrictions. We have suggested that there are a number of opportunities for municipal governments to expand the productivity of their investments in classic terms. There is the possibility that issuing general obligations instead of revenue bonds may lower interest costs and permit access to surplus revenues from quasi-public enterprises. The most constructive approach, however, may well be the development of methods by which the facilities desired locally can be financed by some other governmental entity and leased to the municipality for its exclusive, uninterfered with, use. Given the diversity of American local government, we can anticipate that most of the concepts advanced in this essay will be implemented in part in one area of the country or another but that no one jurisdiction will trade all of its 19th Century recipes for local government for a 20th Century diet of PPBS pills.

APPENDIX A

SOME DEFINITIONS

1.

Public goods and services is used in this study to refer to the diverse inventory of activities financed by State and local governments, sometimes with the assistance of the federal government. In theory, such activities are offered on a non-exclusive basis, that is to say, the public as a whole will share equally in the benefits created; in practice many public goods are distributed on a more restricted basis. Quasi-public goods are those activities (such as electric utility services) which can only be provided if a monopoly position is created for a public or private corporation.

2.

Local borrowing or "local public debt" refers to long-term securities issued by States and their political subdivisions. Short-term bank credit, tax anticipation notes, and other financial instruments, are scrutinized only tangentially. General obligation bonds are secured by the full faith and credit of the issuer.

In ordinary usage, "local public debt" or related terms such as "municipal bonds" and "local government" are applied collectively to

the "State-local sector." When it is necessary to differentiate between the State government and other forms of local government, appropriate wording to that effect is found in the text.

3.

Public finance deals with the fiscal and monetary policies of sovereign governments, i.e., only those that have the power to create money as well as to wage war, levy taxes, and even promote the general welfare. Studies of goal-formation and decision-making in a democracy, of the distribution of benefits and the incidence of taxation, and of policies for full employment and economic stabilization, are all components of public finance. In matters of public finance, however, the fiscal problems of the State-local sector are generally of interest only to the extent they illustrate the complexities of decision-making at the national level in a federalist system. Monetary policy involving the creation of money by incurring deficits or funding indebtedness is central to the study of public finance at the national level but plays no role in local government affairs.

4.

Municipal finance is the term most often used when the focus of attention shifts to the fiscal problems of local government: States and their subdivisions. Without the power to monetize its deficits, each unit of local government must balance its revenues from taxation, public enterprises, and sale of assets, with its expenditures, which include payment of interest and repayment of principal when there has been recourse to debt financing. In the language of municipal

finance, therefore, the proceeds of new issues of local public securities are not revenues in the true sense. In general, the study of debt transactions of local government has been of minor interest in the past to writers on local fiscal capacity and expenditure policy.

APPENDIX B

HISTORICAL FOUNDATIONS OF THE STRUCTURE OF LOCAL BORROWING FOR PUBLIC GOODS

A. Institutional requirements: capital markets and independent local governments

B. Ancient roots of the independent city

C. English roots of America's cities

D. Municipal finance in colonial times

E. Expanding municipal powers after 1789

F. Disinheriting America's municipalities

G. Relying on sale of the Public Domain

H. Affirming State sovereignty: the XIth Amendment

I. Avoiding national programming

J. Relying on State bond issues

K. The collapse of State credit by 1843

A. Institutional requirements: capital markets and independent local governments

The structure of local borrowing for public goods is, for any time or place, a unique derivative of political ideologies, social values, and economic developments. The experience of America, with its manifest desires for decentralized decision-making in both the public and private sectors, is an illuminating story, important domestically because so few contemporary documents in the growing library of intergovernmental fiscal relations contain an understandable history of the development of the institutions we now seek to modify, and of potential importance for the developing nations grappling with the structural problems of delivering public goods and services by means of local governments in a federal system.

The basic conditions for municipal bond finance are a society that provides for the institution of independent local government and a minimum number of lenders willing to exchange their cash for deferred claims on the public credit.[1] Within each local government will arise the basic conflict between economic expansionists who are optimists (and even opportunists) and economic conservatives, a group that includes present creditors, tax-payers, and those prospective seekers of credit who are fearful of the impact of the expansionists on general capital markets in which both public and private interests compete.

With rare exceptions, no such phenomenon as State or local funded debt could exist until western civilization was free of imperialism and feudalism. Such conditions appear in Europe around

the 16th Century, providing something of a model for the governance of the colonizing settlements by the English in North America. In short the experience of local government in America is roughly coterminous with the development of modern forms of government in Europe where cities were part of a landscape cluttered with the archeology of feudalism, evanescent mercantile towns, and engrossed ecclesiastic lands.

B. Ancient roots of the independent city

Until very recent times, the city with some modicum of independence was found only in the western world; the Orient as a land of emperors and of latter-day colonies established by European joint-stock companies, does not figure in our literature. In municipal histories, the cities of ancient Egypt, Assyria and Babylonia merit a few lines, but the story really begins with the city-states of Greece. As Fairlie points out, a firm distinction must be made between a municipality and a city-state; the city-state has the attributes of nation-state as well as local government, and the functions of the government of Athens were as comprehensive as modern municipalities, included education, utilities, and public charities, and were suitably financed by revenues from many different sources.[2] There is a record of defaulted debts by members of the confraternity of Greek city-states.[3]

The history of cities under the Roman Republic, the Early Empire, and the Later Empire occupy a more prominent place in a history of municipal finance, for from Roman law are derived not only the word municipal but many of the forms of administration that characterized the later governments of Europe. What began as a far-flung set of city-states in the days of the Republic eventually came under the watchful eye of imperial agents to be used as instruments of imperial policy in the later days of the Early Empire, and finally turned over to the bishops of the early Church as the empire disassembled. During the centuries that followed, some of the older cities of the Roman Empire, hitherto unfortified, were ringed with

walls against the German invaders who tended to be non-urban until, with the rise of feudalism, administration and commerce came once again to focus upon the fortified centers.[4]

Urban life developed in various ways after activity quickened in the 10th and 11th centuries. In almost every country, there were continuing struggles between secular and ecclesiastic powers and between city guilds and higher authority.[5] Fairlie writes that "none of the French communes reached the political independence of the Italian and German free cities," and, as the French communes came under the direct control of the royal power in the thirteenth and fourteenth centuries,

> Charters were surrendered to the king, constitutions reformed from Paris, and municipal debts extinguished by taxes levied by royal officers.

Throughout Continental Europe, the free cities were brought under the military protection, and sometimes administrative superintendence, of dukes and kings, but the cities of the Dutch Republic became markedly more prominent in their national affairs than did cities in Germany, Italy, France and Spain.[7] This process continued through the 18th Century, thus diminishing the direct influence that a more democratic system of local government on the Continent might have had upon the colonists in America. The later experiences of European municipal administrations, however, interested the social reformers and city planners of the 19th and 20th centuries with respect to social programs rather than the relationship of city to nation. By contrast, the link between England and America has always been closer.

C. English roots of America's cities

What America took from England was not only the Common Law but the concept of local government as a corporate matter, based largely upon the borough system (except in New England where the town meeting itself was endowed by its creators with corporate powers). The history of the English boroughs is the history of the English city between the early Middle Ages and the middle of the 19th Century, even though the boroughs were not at all democratic and depended upon Parliament, largely composed of representatives from the boroughs, for approval of financial transactions. By the end of the 17th Century, some of the larger cities obtained separate charters from Parliament that gave them more control over their affairs than the boroughs enjoyed, but it was not until the Municipal Corporations Act of 1835, following hard behind the belated Reform Act of 1832, that the modern forms of local government in England began to emerge.[9]

By the time of the American Revolution, the pattern of local government was well settled in each of the States, and many of the basic differences have continued to this day, not only in the names and powers given to various subordinate levels but in the relative significance of municipal and intermediate levels of government within the several States. Independence was the occasion for the confirmation of the status of a number of cities, but also, and of greater importance, of clarification of the relationships between the States and the federal government.[11]

D. Municipal finance in colonial times

Like their counterparts in Europe, the cities of the colonial period were financed by grants from the legislatures, various kinds of excises and charges, and an occasional levy on some form of capital (usually in the form of a special assessment), but one of the most important sources was the sale of municipal assets and the lease of municipally-owned property.

Unfunded borrowing was not unknown, as scholars combing the dusty records of individual cities have reported. The earliest example cited by Shattuck is found in New Amsterdam in 1652 when the authorities borrowed money from burghers to erect fortifications; in the records of Philadelphia he found mention of advances from citizens to pay for repairs to wharves, bridges and streets in 1706 and for building market stalls in 1720, with stall rents to be used for paying interest on the notes.[12] In comparison, the earliest funded debt reported for the colonial governments themselves was in 1690, when the Massachusetts Bay Colony issued non-interest-bearing "bills of credit" to pay soldiers returning plunderless from an expedition against Quebec.[13] Public property rights were far more important in these early days. Economic life and the city were one and the same in the late Middle Ages, for the owner of the city, whether guild, noble, or bishop, derived revenue from every activity taking place therein or passing through the gates and, moreover, held much of the land within and without the walls. The colonial governments in America also began their existences as owners of the land and as sole proprietors in the economy.

E. Expanding municipal powers after 1789

The English cities, until the second quarter of the 19th Century, did not play any important role in local government, but the nascent American municipal corporations, with community needs that demanded governmental recognition, promptly assumed the new functions as a matter of course and obtained the powers now usually assumed for cities in the United States. These may be briefly summarized as:

1. The powers incident to all corporations.
2. The power to levy taxes and borrow money.
3. The power to appropriate and spend money.
4. The power to perform certain public services.
5. The power to enact and enforce local police ordinances.[14]

The functions deemed proper for the new kind of municipality developing in the United States continued to expand in the early years of the Republic, but, to finance them, steady streams of revisions had to be made in the relationships between State legislatures and municipal councils. As Fairlie describes the situation:

> These additional activities necessarily meant a larger amount of municipal taxation than had existed in the early part of the century; and the necessity for a regular system of municipal taxation was recognized in most cases by a general grant of the taxing power for any of the enumerated powers of the municipal government, in place of the former system of special authorizations for definite amounts for specified purposes. The general grant was often limited to a certain percentage of the assessed valuation of the city; but this limitation was sufficiently flexible to allow for an increase of taxation with the development of the cities, though resort still had to be made to the legislature for further authority whenever a city wished to go beyond the powers enumerated in the charter.[15]

F. Disinheriting America's municipalities

The economic potential of the governments that emerged in the United States, however, has been allowed to drift from public into private hands over the centuries. Until the early part of the 19th Century the municipalities in the United States were able to build improvements by selling off the land they held, but they were never able to capitalize upon the licenses they gave for the construction of waterworks and later types of utilities, for the right to erect wharves and warehouses, or for the right to do business within the city.

As a result, American cities were increasingly forced to rely upon their taxing powers, having exhausted their potential for what is known as municipal trading, an important aspect of local finance in some areas of Europe where the swing to full reliance on private enterprise had been moderated. More than one writer agrees with Goodnow in questioning both the wisdom and necessity of the process by which cities in America (and often in England and the Continent) wasted "what might have been a new city patrimony of immense value," as he explained that,

> There was, as it turned out, in the streets of cities a new kind of property whose income, if recognized as being at the disposal of the city, would have been sufficient, particularly in the large cities, to pay a large part if not all of the really local expenses of the city government. In the United States, however, the courts very generally refused to recognize the cities as possessing any property rights in the streets, and the legislatures of the states very commonly wasted this property by improvident grants of it, sometimes in perpetuity, to private persons and companies. These grants were in many instances

> unaccompanied by conditions by the enforcement of which cities could either derive pecuniary profit for themselves as corporations or indirect advantage for their inhabitants through improvement in service.[16]

New York City is a case in point, for it was able to finance its improvements by the sale of land and rentals from municipal facilities until about 1812, when it first sold bonds, as one of a handful of larger cities that were a generation in advance of the era of city bonds.[17]

G. Reliance on sale of the Public Domain

The history of public debt between Independence and 1845 is of critical importance for understanding the American system of local government and private enterprise. The temper of the times was against public borrowing, in line with the viewpoints of Hume, Adam Smith, and, later, Ricardo and Mill.[18]

The new federal government had assumed the debts of the States attributed to the Revolution in the amount of $72 million and set about to liquidate it by selling off the Public Domain. By 1835, in spite of the Louisiana Purchase and the War of 1812, the Federal Government was completely free of debt, to its own citizens as well as to the foreign countries that had lent funds for the conduct of the war for independence and who had threatened to intervene in American affairs when the debts fell into default during the days of the Articles of Confederation.[19]

A word is in order about the Public Domain, for again we find governments hoping to finance their improvements and debts by selling off their assets. With the creation of a national government, the westerly borders of the States were defined, and the areas not in the States proper became the "original public domain." The federal government's intent was to alienate these lands in such a way as to promote settlement and to provide federal revenue from a non-tax source. Although these concepts neatly fitted the political and economic theories of the time, the process of realizing cash from these vast domains was extremely difficult, and events never permitted the implementation of a rational or efficient policy by which

revenues would continue to be available for implementation of governmental programs at either the federal or State level.[20]

A few large tracts were sold for cash, but then it became necessary to sell land on credit terms, following the outlines of a report by Hamilton in 1796. At that time and until 1820, settlers could purchase a quarter section (160 acres) at a price of $1.25 an acre, but the procedure had the unfortunate effect of absorbing in the early years of repayment all of the settler's cash resources that he needed for the purchase of productive equipment and supplies. Thus in 1820, the federal government agreed to accept as payment bank notes issued by local banks that held mortgages on the land purchased from the Public Domain. Jackson's action in issuing the Specie Circular of 1835, which made the bank notes no longer acceptable in the exchange, was one of the major factors precipitating the Panic of 1837-39, itself a critical factor in the collapse of State finances and the ensuing shift from State borrowing to municipal and private borrowing. In any case, by 1835 the federal debt had been extinguished, and from 1841 on settlers could acquire a share of the Public Domain by pre-emption, by homesteading, and, as reward for military service, by receiving bounty. Large amounts of the Public Domain were given to the States directly and under the Morrill Act of 1862 for the encouragement of education, a process that has been called wasteful because it also encouraged the development of barren lands. Not quite a century later, the federal government was called upon to rescue the livelihoods of farmers working the dustbowl or grazing livestock on rocky uplands.

H. Affirming State sovereignty: the XIth Amendment

The struggle that led to adoption of the XIth Amendment and to its aftermath was a more fundamental issue in the early years of the United States, ultimately more influential in shaping the course and structure of the nation than the disposition of the Public Domain. The Amendment, adopted in 1795, reads quite simply:

> The Judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State, or by Citizens or Subjects of any Foreign State.[21]

In 1792 a citizen of South Carolina brought suit against the State of Georgia for the recovery of a debt.[22] When the case, Chisolm v. Georgia, 2 Dallas 419, came to the Supreme Court, the pre-Marshallian justices affirmed that a State could indeed be sued by an individual. Georgia immediately passed a law prohibiting, on pain of death, any attempt on the part of U.S. marshals to collect the judgment on the debt, and a storm of protest swept across the new nation. Adams' reading of contemporary documents suggests that the Constitution would not have been adopted had the doctrine of Chisolm v. Georgia been anticipated, although the language of the original Constitution is clear on this point. The XIth Amendment was quickly passed and ratified, establishing a truly sovereign character for States, and Adams considered it anomalous that States, otherwise limited to the exercise of local functions and never called upon to borrow money except for industrial purposes or local defense, should be granted the protecting robe of complete sovereignty the moment they assumed the role of debtor. The

immediate effect of the Amendment was to render the States immune for all practical purposes from suits on their debts, and thus a vast set of borrowing opportunities opened before them. Thereafter the holder of a bond issued by a State had to rely wholly upon the faith of the State's legislature for interest and repayment on his note. The States thus became as free as the federal government itself in their financial undertakings, immune from attack by foreign as well as domestic bondholders, in sharp contrast to the vulnerability of the municipal corporations to civil suits on their contracts.

The actual amount of public borrowing in the first thirty years of the Republic was small, however, for the federal government was intent upon paying off the debts it had assumed from the Revolution, the Louisiana Purchase, and the War of 1812, the State governments were busy establishing their sovereign powers under the aegis of the XIth Amendment, and only the larger cities, as reported by Shattuck, were occasionally found issuing bonded indebtedness, all of which was backed by the full faith and credit of the municipality: Philadelphia in 1799, New York City in 1812, Baltimore in 1817, and Boston in 1822.[23]

I. Avoiding national programming

How to develop the nation? There was general agreement, articulated by President Washington and an article of faith thereafter, that political ties between the seaboard and the interior could only be strengthened by the building of adequate communications, from which would come commercial ties as well. The argument raged during the early 19th Century as to whether Congress had the power to administer the roads it might build through the States, although there was little doubt it had the power to advance funds for their construction. Reports Adams,

> A national board of internal improvements was established; national surveys were carried on; and, had not certain questions that imperiled the general safety forced themselves upon public attention, we should now have been able to write the experience of national improvements actually undertaken.[24]

However, opposition to federal preeminence gathered force as the national government acquired formidable centralizing powers by its purchase of the Louisiana territory and by its conduct of the War of 1812.[25] Monroe vetoed the Cumberland-Road bill in 1822 because of the uncertainty regarding the power of the federal government to manage the road, and, when Jackson, intent upon decentralizing authority, vetoed the Maysville-Road bill in 1830, the legislatures of the States were provided with the mandate to proceed with the internal improvements so long desired.

Financial muscle for the purpose was provided for State-run enterprise by a series of programs that would now be called revenue sharing between the federal and State governments and bloc grants

from the federal government to the states. Such funds represented the distribution of surplus revenues from the sales of the Public Domain, now that the federal debt originally incurred by the States had been expunged, plus prior distribution of a percentage of the sale proceeds themselves. Moreover, the times were expansionary and inflationary; enthusiasm for the success of projects soared when all could see the magnificent flow of revenues into the coffers of the Erie Canal built by the State of New York. The Erie Canal then served as a model and as a competitive threat to local economies caught without equal access to the interior. No one yet invoked the patron saint of laissez faire to impede the rush of public bodies into the game of economic development.

J. Relying on State bond issues

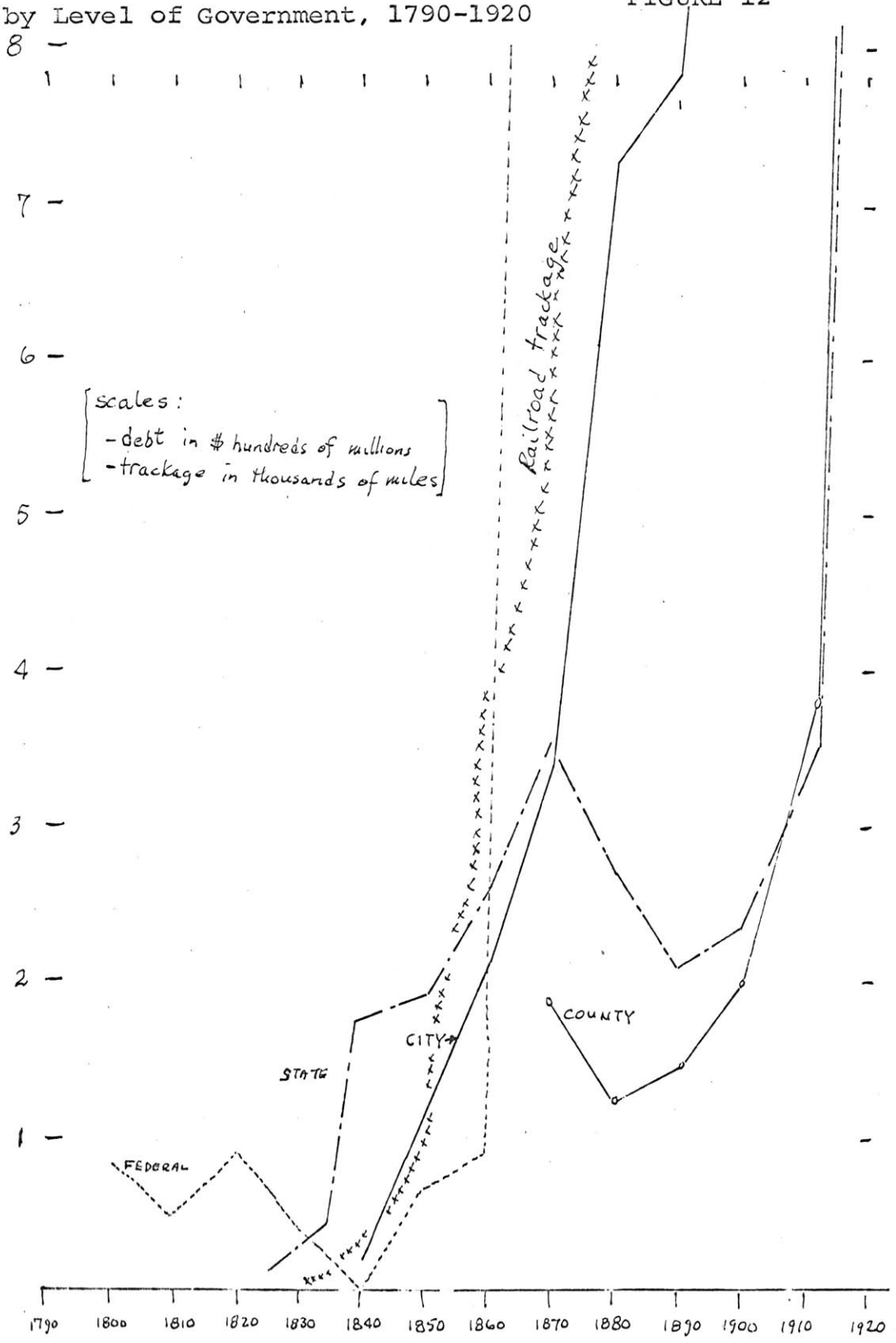
Figure 12 clearly illustrates this history of the early years. The federal debt vanishes; State debt begins to increase between 1825 and 1835 and then climbs sharply until it levels off in the 1840's, at which point the debt of cities (not including county debt) begins its career. We shall not need to be as concerned with the shape of federal debt hereafter, but it is no more than just to bid farewell to the subject by quoting an eminent 19th Century historian:

> Ever since emptying its plethoric purse into the greedy State treasuries, the government had not received enough to pay its annual expenses. Every year it sank a little deeper into the mire of debt.[26]

The States began to use their credit for constructing railroads, canals, and other internal improvements and for buying stock in banks loaning funds for such purposes. State debt jumped year by year; $13 million outstanding in 1825; $26 million in 1830; $66 million in 1835; up to $107 million by 1838; and $231 million in 1843.[27] It is not entirely clear who purchased the bulk of these securities, but substantial amounts were held by foreign investment bankers who made their views about repudiation well known when the bubble burst.[28] While space does not permit close examination of the particular projects so financed in the several States, the graph of railroad mileage in operation in Figure 12 shows how that sector of the economy was growing at a rate that tends to match the growth in State and local financings; the story of the defaults in State bonds is adequate treatment of the situations where growth of population

Growth of Governmental Debt
by Level of Government, 1790-1920

FIGURE 12



and the local economy did not generate sufficient revenues to provide debt service. The nation's total population is also shown for reference.

The pattern of default and repudiation that ensued led ultimately to radical changes in the structure of local government and has been a factor in the development of the revenue-debt problems that have plagued local governments in more recent decades. As seen by Chamberlain, these early troubles fall into definable periods, all with the same underlying source:

> The ultimate cause of state repudiation then, is a low standard of business ethics.[29]

K. The collapse of State credit by 1843

Chamberlain, in his review of events defines three major periods of stress: the first repudiation period dating from 1837 to 1845; the repudiations and defaults connected with financing the Civil War; and the second repudiation period dating from 1870 to 1884. In all three situations, he finds the southern States having the worst record, the Western and mid-Atlantic States with better records, and the New England States, generally more conservative and with less need for internal improvements, with the most enviable record.

In the first period, Massachusetts was the only New England State to issue bonds. Delaware and two new States, Wisconsin and Iowa, joined the other New England States in having no bonds of record. Ohio issued large amounts in the earlier years and, with New Jersey, imposed limits on the amounts that could be outstanding. New York, emerging as the Empire State, managed its considerable debt in good style, but both Pennsylvania and Maryland incurred temporary defaults in 1842. As the list moves west and south, the blemishes become more serious. Indiana defaulted in 1840, Illinois in 1841, but honored their debts. Alabama defaulted and had to resort to taxation, an unusual step for the period. Michigan, whose ebullient beginnings in 1837 are chronicled by Adams and others, repudiated part of the debts carried in her name, acknowledging only those funds actually received by the State itself from the sale of bonds. Florida and, in an outrageous fashion, Mississippi, deliberately repudiated their debts.

The many financial histories of the United States are full of

domestic and foreign comments in reaction to the various strategems of repudiation which garnish the record. The library includes an open letter from a New York gentleman who was livid at Daniel Webster's support of a bill that would allow the federal government to stand responsible for the State debts, for the gentleman saw in the XIth Amendment a clear disparagement of any foreign attempt to secure redress and a clear mandate for States to abandon obligations as they chose; his sentiments were uttered officially on behalf of the people of Mississippi in much more colorful language by their governor.[30] When Baring Brothers was approached by the federal government to discuss the terms of a loan that would enable the federal government to assume some $200 million of the debt in 1843, that redoubtable banking house would not discuss the matter. Adams quotes a British writer:

> America is not the country it is cracked up to be; too many speculators and gamblers -- indeed, to be plain, I look upon it, from Maine to Florida, as one vast swindling shop.[31]

And Sydney Smith,

> Sad is the spectacle to see you rejected by every State in Europe as a nation with whom no contract can be made because none will be kept; unstable in the very foundations of social life, deficient in the elements of good faith, men who prefer any load of infamy, however great, to any pressure of taxation, however light.[32]

In the following sections, we turn to the impact of this situation upon the municipalities waiting in the wings and to the related topics of the restrictions and other guidelines developed to head off defaults. The Civil War defaults were relatively minor, often resulting from attempts to repudiate or change the terms of bonds fraud-

ulently issued by carpetbaggers, and otherwise resulting from temporary inabilities to pay acknowledged debts in the aftermath of war.[33] Chamberlain notes, with invidious remarks about the character of southerners generally, that only Southern States were involved in the repudiations of the second period, 1870-84: Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Louisiana, Arkansas, Tennessee, and in part, West Virginia. The victory of the States in the early 19th Century now had a hollow ring, for with restrictions imposed by the people upon their power to borrow, their potential as stewards of their own economies was passed into other hands.

NOTES TO APPENDIX B

1. Adams, Public Debts, Ch. 1.
2. Fairlie, Municipal Administration, p. 6.
3. Hillhouse, Municipal Bonds, p. 37.
4. Goodnow & Bates, p. 50 ff.
5. Baxter.
6. Fairlie, op. cit., pp. 26-7.
7. Goodnow & Bates, op. cit., Ch. III; Fairlie, op. cit. Ch. III.
8. Fairlie, op. cit., p. 76.
9. Fairlie, Essays, Ch. IV; Goodnow & Bates, op. cit., pp. 67-72.
10. Goodnow & Bates, op. cit., p. 93.
11. Fairlie, Municipal Administration, p. 77.
12. Shattuck, p. 12.
13. Davis, p. 9.
14. Goodnow & Bates, op. cit., p. 93.
15. Fairlie, op. cit., p. 84.
16. Goodnow & Bates, op. cit., p. 398.
17. Shattuck, p. 13; Hillhouse, op. cit., p. 31.
18. Groves, p. 540.
19. Groves, p. 540.
20. Lutz, p. 197.
21. Senate Document 49/87:1.
22. Adams, op. cit., p. 292; Chamberlain, p. 124.
23. Shattuck, p. 306.

NOTES TO APPENDIX B (continued)

24. Adams, op. cit., p. 323.

25. Adams, op. cit., Ch. II, pp. 317-31; Dewey, pp. 214-20.

26. Bolles, p. 577.

27. Adams, op. cit., p. 318.

28. Groves, p. 540.

29. Chamberlain, p. 137.

30. Adams, op. cit., p. 338.

31. Adams, op. cit., p. 319.

32. Gribble, p.

33. Hillhouse, Ch. III.

APPENDIX C

NOTE ON THE MUNICIPAL AND INTERGOVERNMENTAL REFORM MOVEMENTS

Theories of local finance were without value -- and restrictions on taxation and debt were essential -- so long as Carpetbaggers and the later machine politicians held sway in the cities. Reform came at the turn of the century. (See especially: A Municipal Program: Report of a Committee of the National Municipal League. Macmillan, New York, 1900.) Several important organizations founded at that time became the source of much of the material published regarding municipal administration, local finance, city planning, and capital budgeting: the National Municipal League, the International City Managers Association, the Municipal Finance Officers Association, and the American Economic Association. In their stable of writers, who were sound researchers of available data and opinion and worthy purveyors of classical doctrine were, notably, Carl Chatters, A. M. Hillhouse, A. F. MacDonald, and Paul Studensky, part of a group from whom comes not only our present knowledge of municipal practice during the 1920's and, especially, the turbulent 1930's, but also much of the early research supporting recommendations for the more

complex reforms advanced in the larger field of intergovernmental relations. To an extraordinary degree, contemporary proposals reiterate their sentiments.

Reference is made here to the stream of reports that have analyzed State-local fiscal problems in terms of the distribution of powers and obligations in the federal system. The post-Keynesian concepts of efficiency and equity have added new chapters to the basic concerns for the improvement of the system. A major study of intergovernmental fiscal relations was undertaken in the early 1940's, reviewed in the 1955 Kestnbaum report, and continued under the aegis of the Advisory Commission on Intergovernmental Relations. These documents are listed in our bibliography.

The more theoretic aspects of public purpose and public wants were not developed until the Keynesian period. During the days of the municipal reformers a substantial literature developed in support of Henry George's single-tax movement, but more relevant to our concern have been the writings in support of municipal socialism, providing public ownership of "productive" assets. Examples are found in the writings of Ely, Wilcox and others also included in the bibliography.

APPENDIX D

DEVELOPMENT OF DATA SOURCES

For data about the 19th Century, almost all writers have relied upon the tables in Adams, Public Debts, among them being Studenski, Hanson & Perloff, and the Advisory Commission on Intergovernmental Relations. The Research Committee on Urbanism reported in 1936 to the (U.S.) National Resources Committee as follows:

> The period of the [first] World War marked the end of some four decades of detailed official statistical reporting of comprehensive scope relating to the many phases of urban America. As early as 1880, the Bureau of the Census published a two-volume work entitled Social Statistics of Cities, which covered 1758 pages and presented running descriptions and some detailed statistics of the topography, history, transportation, manufactures, physical layout, cultural facilities, and governmental services of 222 cities of the population class of 10,000 and over. The 1890 census went still further and presented, in summarized statistical tables, much the same material in more comparable form for each of the 345 cities of 10,000 and over. In 1898, financial statistics for cities were collected for the first time. These statistics have continued to the present day. From that date also the collection of general city statistics continued annually until 1909 with irregular reports thereafter until the World War. The General Statistics of Cities tapered off until the last report in 1916 covered only the fields of municipal park and recreational facilities, and both the title and the idea of official general statistics were given up in favor of the publication of occasional special monographs and series.

Strangely enough, the original survey of 1880 was partly repeated in 1909, not as an official American projects but as a British Board of Trade study covering the economic life of twenty-eight of the larger industrial cities of the United States, published by His Majesty's Stationery Office and then republished in 1911 as a United States Senate Document (Number 22).

This retrogression of the general statistics of cities is apparent from Table III which reflects the range and content of these statistics. In a general way the sequence in titles is symbolic of the narrowing scope of the official statistics on various items gathered with particular reference to cities. Beginning in 1880 and 1890 with the broad title Social Statistics of Cities, and employing intermittently the titles of Statistics of Cities and General Statistics of Cities, the title finally shifted to the narrower term Financial Statistics of Cities. Appearing as decennial publications in 1880 and 1890, the general statistics were published annually from 1898 to 1909, disappearing then except for a short revival in 1915 and 1916. The Financial Statistics of Cities appeared annually from 1909 to the present time skipping however, the years 1914 and 1920. Further,the number of cities covered in these reports has on the whole diminished. In 1890 345 cities were included; the highest figure was reached in 1903 when 544 cities were included, while in 1934 only 94 cities were covered. The population range of the cities enumerated has also narrowed. Beginning with cities of 10,000 in 1880 and 1890 and going as low as 8,000 in 1903, these reports were restricted to cities of 30,000 and over in all other years until 1932, when they were limited still further to cities of 100,000 and over. The range of subject-matter covered by these general statistics also has been noticeably contracted. (From Interim Report, July 1936, p. 17-18.)

Comprehensive data on State and local finances began to be available after Congress in 1898 instructed the Commissioner of Labor to make annual reports on major cities. Aggregate data by State was published for 1902, 1913, 1922, 1927, biennially after 1932, and annually after 1952.

The first acceptable counts of the number of governments (i.e., potential sellers of bond issues) came only in the late 1930's in the work of Anderson and various federal agencies. The first detailed Census of Governments was conducted during 1941 but published only in part because of the war. A limited survey was made in 1947,

with full Censuses being taken in 1957, 1962, and 1967. Many of the well-known cross-sectional analyses of cities were performed on 1957 data. The 1962 Census was considerably more detailed than the earlier ones and was published in parts over the following years. Only the preliminary totals have been published from the Census of 1967, but no detailed reports are available at this writing. See U.S. Bureau of the Census. Historical Statistics of the United States: Colonial Times to 1957. Supt. of Documents., GPO, Washington, D.C., 1960. An excellent discussion of sources of data, including bibliography, is found in the introductory notes to Chapter Y, Government Employment and Finances, pp. 694-708.

APPENDIX E

LOCAL DEBT IN THE NATIONAL ECONOMY

A. Debt to GNP

In its report on State constitutional restrictions on the issuance of local government debt, the Advisory Commission on Intergovernmental Relations investigated the ratio of both local debt and interest expenditures to gross national product at various points of time after the Civil War to 1960.[1] Their measure was an amount of debt and debt service per $1,000 of GNP. With respect to debt, they found that local government debt per $1,000 of GNP was $77 in 1870, $90 in 1902, increased steadily through the years to $140 in 1929, jumped to a high of $280 in 1932 as a stable volume of local debt became a larger ratio to a depressed GNP, fell to a low of $58 in 1948 as debt was paid off and GNP recovered through the end of the 1930's and the war years, and climbed steadily thereafter to the point in 1960 where the table ended, at which time the figure was $102. (A comparable figure for the end of 1967 is approximately $142.) With respect to the Advisory Commission's calculations regarding debt service, including interest and repayments, their data showed a high of over $26 per $1,000 of GNP in 1932, and a 1960 level of not quite $8, the variation stemming from the same relative movements of GNP and volume of debt noted above.

Given a precipitous decline in the level of GNP, any fixed financial obligation becomes onerous and will be deferred if possible as available resources are devoted to more essential purposes, and thus the records of the Depression years are replete with instances of defaulting on municipal obligations. Given a rising level of GNP in real terms, however, the size of local government expenditures and debts becomes an index to the allocation of national resources between the public and private sectors.

To illustrate the latter point, Figure 13 has been prepared. The horizontal axis shows GNP in real (1958) dollars, while the vertical axis gives two sets of State and local data for (A) total purchases of goods and services in each year and (B) locally-owned public construction expenditures financed both by federal grants-in-aid and by local resources.[2] On such a correlation graph, a 45° line indicates that the two sets of data being charted are perfectly correlated, so that an annual change in one set is matched with a corresponding change in the other set of data.

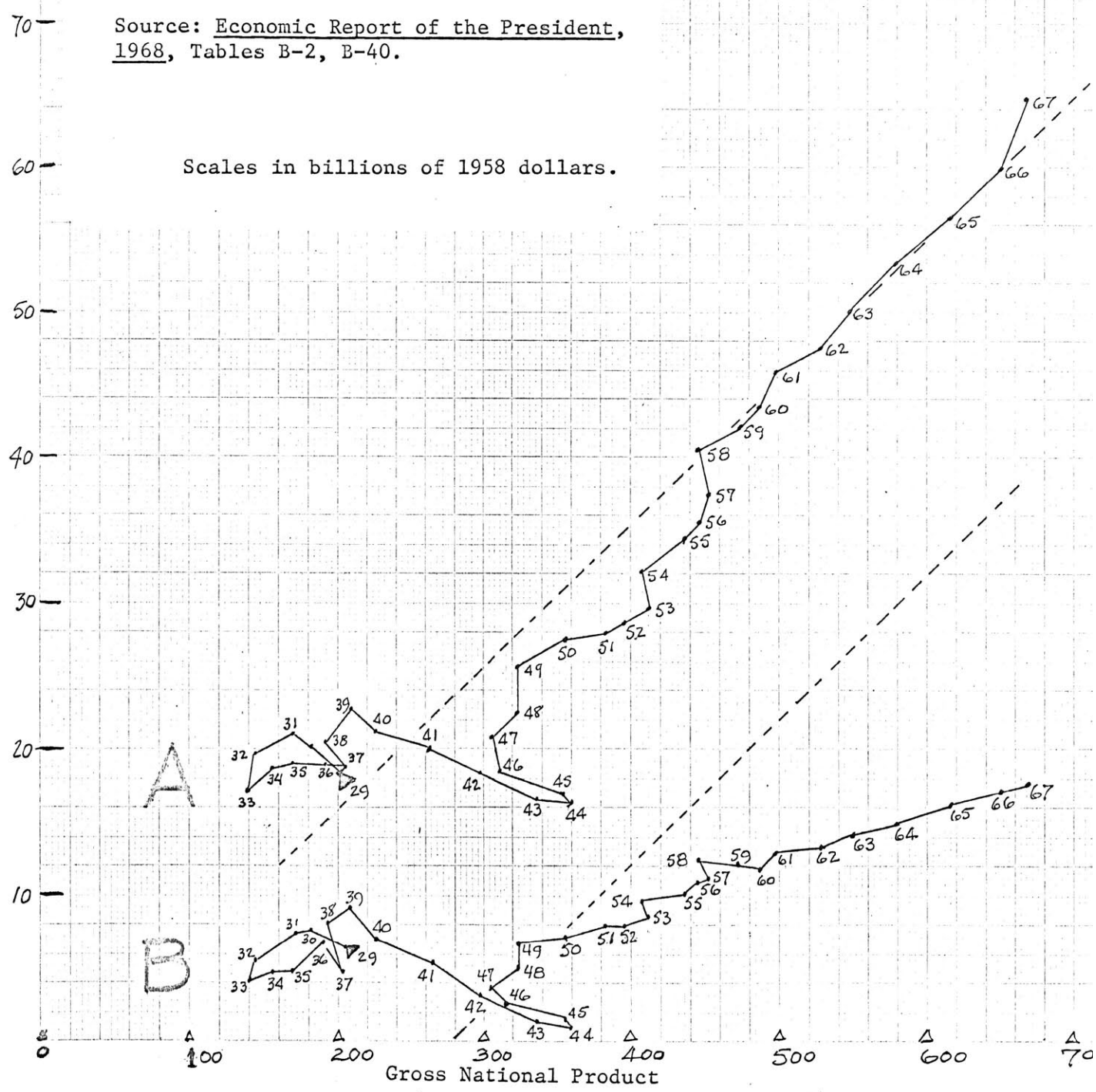
The resulting graph of total purchases of goods and services by State and local governments against GNP shows clearly how declines in GNP during the 1930's were hardly matched by a decrease in State and local expenditures until the end of the decade when the process became reversed, with GNP rising and the State and local sector lagging behind in real terms. The graph also demonstrates that the 1950's were years of gathering momentum for the State and local sector in relation to GNP, with the 1960's a time when the two series moved together. The growing share of GNP devoted to State

FIGURE 13

GROSS NATIONAL PRODUCT OF THE UNITED STATES COMPARED TO (A) STATE/LOCAL PURCHASES OF GOODS AND SERVICES AND (B) STATE/LOCALLY-OWNED PUBLIC CONSTRUCTION, BY YEAR 1929-1967, IN CONSTANT (1958) DOLLARS.

Source: Economic Report of the President, 1968, Tables B-2, B-40.

Scales in billions of 1958 dollars.



and local activities is evident in 1967 and 1968.

While the general shape of the graph relating State and local public construction to GNP is similar to the graph relating their purchases of goods and services to GNP, the indication is that the construction activities of State and local agencies are increasing at a slower rate than are their non-construction activities, in itself a not surprising finding in light of the post-war emphasis on higher pay for echelons of local government employees, including teachers, combined with the general expansion of local services. With regard to the comparability of the A and B data, note that federal support funds are included in both the purchases and construction series but that the construction data (B-graph) were converted into 1958 dollars by use of the implicit price deflator for non-residential construction in gross private domestic investment, an index that has risen slightly slower than the deflator for State and local purchases generally, with the effect that the size of the construction budgets as shown may be slightly overstated, a bias that merely strengthens the finding about relative rates of change, however.

Whether the share of the total national economy devoted to the affairs of State and local government is too big or too small is a subjective matter reflecting the observer's own social and political proclivities and perception of needs in the welfare state, except in so far as the amount, distribution, and timing of State and local financial transactions are considered factors to be manipulated or controlled in pursuit of goals represented by programs for

economic growth, economic stabilization, and full employment.

B. Local and other debt

Municipal bonds compete in the nation's credit markets, and one can gain a sense of the importance of this form of indebtedness for the economy as a whole by inspection of Figure 14.

The federal debt surged during the Second World War after its gradual rise during the Depression, with the postwar years showing a renewal of the upward tendency. The increase in debt outstanding, however, is most notable in the private sector, comprised of vast amounts of corporate securities, non-farm mortgages, and commercial finance company and consumer credit. The farming community's indebtedness and the debt issued by State and local governments pale in comparison, although the amount of State and local debt stood at an all-time high of $110.1 billion at the end of 1967, representing 8% of the national total.

The crucial aspect of this distribution of debt, however, is not to be found in comparisons of the percentage rates of increase by category over the past three decades, nor in the absolute amounts of the increase, but in an understanding of how the change in the nature of savings institutions under the impact of the nation's tax system has operated to limit the number of investors interested in acquiring municipal bonds at yields State and local governments are willing to pay.

The problem with respect to the demand for municipal bonds, in brief, is that more and more of the savings of the American people

FIGURE 14

GROWTH OF DEBT IN THE UNITED STATES,
BY TYPE OF ISSUER, BY YEAR, 1929-1967

Source: Economic Report of the President, 1968, Table B-58

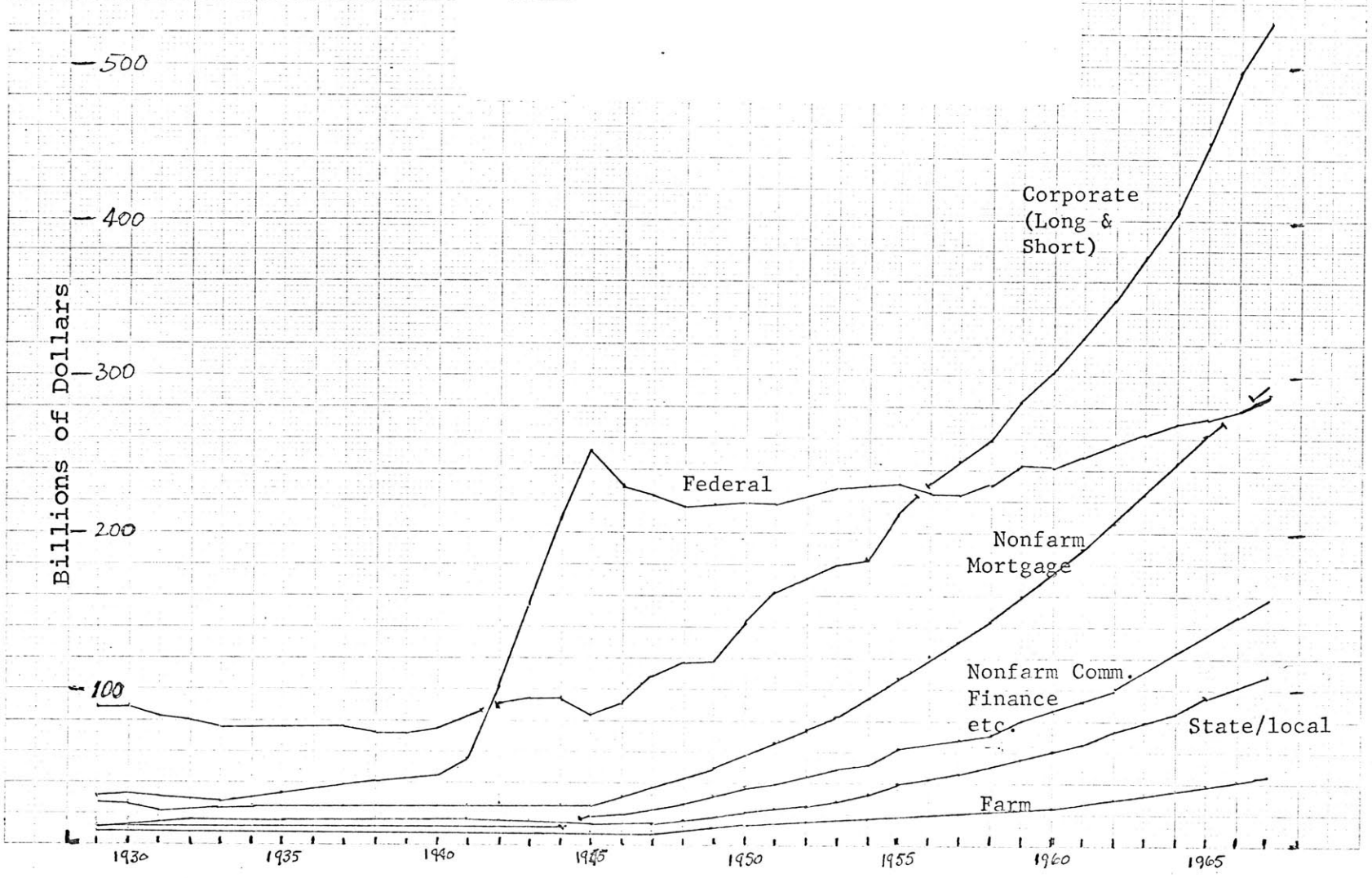


FIGURE 14

are going into tax-sheltered financial intermediaries such as pension trust funds, life insurance policies, and various types of savings institutions, none of which derive benefits from the tax exempt interest feature of municipal bonds. In addition, funds that in previous years had looked upon securities issued by State and local governments with favor, either as a question of loyalty or as a matter of investor prudence, have been induced to decrease their holdings of municipal bonds in favor of higher yielding corporate bonds and inflation-hedging common stocks; the investment record of State and local pension trust funds and life insurance companies is a case in point. This squeeze on the demand for municipal tax exempt bonds has been analyzed elsewhere, but it remains the salient characteristic of municipal bonds in the context of national sources of credit, a factor that will also be relevant in discussions below concerning the role that municipal bonds can be expected to play under varying investment climates to the extent that those climates are determined by national fiscal and monetary conditions.

NOTES TO APPENDIX E:

1. ACIR, State Const. and Stat. Restrictions on Local Government Debt, p. 18.

2. Data from Economic Report of the President.

in the Congress which contemplate a different approach, involving distribution of funds on a less conditional and narrowly-targeted basis. While Federal "revenue-sharing" had sometimes previously been proposed, the recent upsurge of congressional and popular interest can be traced to a proposal which was developed in 1964 by a fiscal study group that included Prof. Walter W. Heller of the University of Minnesotta and Joseph A. Pechman, Director of Economic Studies of the Brookings Institution, and which is therefore often referred to as the "Heller-Pechman Plan." [1]

The revenue-sharing plan that was outlined for consideration in 1964 was specifically offered as an addition to, rather than a substitute for, existing Federal programs for categorical grants-in-aid. Some of the principle objectives of a Federal revenue-sharing system have recently been explained by Drs. Heller and Pechman as follows:

> Revenue sharing is intended to allocate to the States and local governments, *on a permanent basis*, a portion of the very productive and highly growth elastic receipts of the Federal Government. The bulk of Federal revenues is derived from income taxes, which rise at a faster rate than income as income grows. By contrast, State-local revenues barely keep pace with income. State-local needs have outstripped the potentialities of their revenue system at constant tax rates, with the result that tax rates have been pushed steadily upward throughout the postwar period and many new taxes have been added. Since State-local taxes are on balance regressive, the higher State-local taxes impose necessarily harsh burdens on low-income recipients. In addition, essential public services are not adequately supported in many, if not most, communities because they do not have the means to finance them * * *.
>
> Categorical and general-purpose grants have very different functions and these cannot be satisfied if the Federal system were limited to one or the other * * *.
>
> Categorical grants are needed because the benefits of many public services "spill over" from the community in which they are performed to other communities. Expenditures for such services would be too low if financed entirely by State-local sources, because each State or community would tend to pay only for the benefits likely to accrue to its own citizens * * *.
>
> General-purpose or bloc grants are justified on substantially different grounds. In the first place, all States do not have equal capacity to pay for local services. Even though the poorer States make a larger relative revenue effort, they are unable to match the revenue-raising ability of the richest States. Second, Federal use of the best tax sources leaves a substantial gap between State-local need and State-local fiscal capacity. Moreover, no State can push its rates much higher than the rates in neighboring States for fear of placing its citizens and business enterprises at a disadvantage.[2]

At the time the "Heller-Pechman Plan" was first publicized, its advocates urged that the shared revenue should go only to the State governments. They conceded that problems of public services and financing are most critically evident at the local level, and especially in major urban areas. However, they pointed out that: in general, the State governments have been responsive to rising public service needs, as evidenced by their tax-raising efforts and in many instances by extensive grant-in-aid programs; the proposed additional revenue would enable the States to increase their aid to local governments; and the great variation in State-local patterns of govenment and fiscal relations seemed to preclude any workable and equitable arrangement for direct Federal-local sharing.

These views, however, were not shared by some spokesmen for local government, who strongly urged provisions to protect the interest of major urban areas in the States' use of the prospective additional funds. Accordingly, the authors of the plan have since modified their original stand and "in the light of urgent local needs and the observed tendency of State capitals to shortchange their major central cities * * * have been persuaded that an explicit 'pass through' rule may be desirable to recognize the legitimate claims of local government." [3] They still recognize, however, that any effort in this direction must take account of the great diversity, from State to State, in existing patterns of State-local fiscal relations.

We believe there is urgent need for early action to establish a system of Federal revenue-sharing which would incorporate major features of the "Heller-Pechman Plan" but which would also provide for a share of the allocated funds to go *directly* to major cities and urban county governments. Accordingly, we make the following recommendation:

Recommendation No. 1—A Federal revenue-sharing system

The Commission recommends that Congress adopt a system for regular revenue sharing with State governments and major

[1] A congressional committee has recently issued several publications about this and other possible types of Federal action that might help meet the pressing fiscal problems of State and local governments. See *Revenue Sharing and Its Alternatives: What Future for Fiscal Federalism?* Hearings (July 31 and August 1, 2, 3, 1967); and Vol. I, *Lessons of Experience;* Vol. II, *Range of Alternatives for Fiscal Federalism;* and Vol. III, *Federal, State, Local Fiscal Projections.* Subcommittee on Fiscal Policy of the Joint Economic Committee, 90th Cong., 1st Sess.

[2] Walter W. Heller and Joseph Pechman, *Questions and Answers on Revenue-Sharing,* Washington: The Brookings Institution, 1967 (Reprinted from the hearings cited in footnote 1 above).

[3] Ibid.

cities and urban counties. The revenue-sharing system should be on a simple formula basis that (1) reserves to a Federal trust fund a sum for annual allocation consisting of a legally authorized percentage of the total net taxable income reported under the Federal individual income tax; (2) provides an allocation to each State area based[4] primarily upon population, but with an adjustment for relative total State-local tax effort and additional crediting for State revenue from taxation of individual income; and (3) provides for a portion of the allocation for individual State areas to be paid directly to major municipalities and urban county governments on a basis determined by their respective shares of all State and local tax revenue in the particular State. The system should leave a high degree of discretion with the recipient governments as to their application of the distributed funds.

Primary features

Before discussing our proposal in detail, we will review its major aspects, noting whether and in what respect it may differ from the Heller-Pechman version.

The *purpose* is basically the same—to tap the highly productive Federal income tax so that State and local governments might regularly receive a defined portion of taxable personal income.

The *mechanism*, under our proposal as under the original plan, would be a trust fund. This fund would regularly receive for allocation a total sum determined by statutory provisions, rather than being contingent upon annual detailed appropriation action with all its uncertainties and potential delays.

The *State-by-State allocation* we recommend, as in the case of the earlier proposal, would be primarily in terms of population. However, we specifically urge that adjustments be made for the level and form of State and local tax effort.

The *use of funds* would, for recipient governments, have few strings attached under our proposal as under the plan previously developed.

The *recipient governments* under the original plan, as noted earlier, would have been the State governments only. Our proposal explicitly offers a formula by which a portion of the shared revenue would be allocated directly to major cities ad major urban counties.

Allocation methods

Our recommendation would involve two major steps in apportioning the total sum available among particular individual governments: (1) determining the allocation for each of the 50 State areas;[4] and (2) apportioning each State area total among major cities and urban counties and the State government itself.

We are suggesting that the State area allocation take account of fiscal effort, as measured by the relation of all State and local tax revenue to personal income in the various States, and with extra weighting for revenue from State individual income taxes. Each State area's proportion of the Nation's total population would be adjusted by this index to determine its share of all the funds available.

Following are illustrative calculations (based upon 1966 data) for two neighboring States that differ considerably in relative fiscal effort, as thus measured:

	Illinois	Wisconsin
(1) Percent of U.S. population	5.528	2.135
(2) Index of fiscal effort:		
(a) All State-local taxes per personal income, relative to U.S. average	.853	1.185
(b) Same, adjusted to give double weight to State income tax revenue	.785	1.373
(3) Proposed State-area allocation as percent of U.S. total (2b times 1)	4.321	2.920

Our proposal that extra weight be given to revenue from State individual income taxes is intended to encourage further use of this type of tax, which is not yet used at all by a third of the States and is only very modestly employed in a considerable number of others.

The second step in the apportionment process—determining the individual-government parts of each State-area allocation—is more fully explained below under "Selective Direct Local Sharing."

Minimum constraints

We are urging that the allocations be made with a minimum of constraints upon the functional application of the funds by the recipient governments. Fundamentally, this recommendation takes account of the basic purpose of the proposed revenue-sharing system, which should provide not only a measure of increased fiscal capacity but also more freedom of action for the aided governments; i.e., with more opportunity than is generally possible through conditional grant arrangements for them to set priorities in accordance with their own respective conditions.

This no-strings approach, we realize, may seem less appealing politically to the Congress

[4] "State area" is the term used to include *all* governments within the boundaries of a state—including the state government, county governments, municipal governments, and so forth. "State government" refers of course solely to the superior level of government within the state.

than would a more restrictive earmarking of funds. Perhaps only minor harm would result—in view of the prevailing makeup of State-local expenditure—if the allocations were to be made available for only some few major purposes, such as education, public welfare, health, and sanitation. But even such summary specification would hamper responsible policymaking at the State and local levels unless and until—as might well be expected—adjustments had been made in the way that "own revenue" sources were applied to various needs. In other words, a second argument for the lack of detailed functional constraints is that, at least over time, they would tend to become illusory: complicating, but ineffective.

It may be noted that, while no-strings aid would be a new development for the Federal Government, there are many precedents for this kind of intergovernmental relationship, not only in other countries but also at the State-local level in the United States. All but a few State governments distribute some funds for "general local government support" (as classified in Census Bureau reports), and the total of such State distributions in fiscal 1967 was $1.4 billion. In a few States, such unrestricted aid makes up a considerable fraction of all State-local payments.

Selective direct local sharing

The local government feature of our proposal is of crucial importance. In urging direct formula-based payments to "major cities and urban counties" we have in mind municipalities of 50,000 or more and those county governments above the same minimum size in which at least half the population is "urban." As of 1960, there were 310 such municipal governments, with 63.4 million inhabitants, and 407 such major urban county governments, with 103.1 million inhabitants. The net total 1960 population of the prospectively aided major units (without double counting for the majority of major municipalities that are within major urban counties) was 121.7 million, or two-thirds of the Nation's total population.

On the other hand, this selective approach would avoid the undesirable features of a system that envisaged direct Federal-local sharing to local governments generally. Any such sweeping effort should be avoided on at least two grounds: the tremendous administrative complexities involved (with some 80,000 local units to be considered), and the prospect that no-strings Federal aid would tend to sustain and entrench many local governments that are far too small to represent viable units. Under the suggested two-stage distributive formula, the total allocation among State areas would be determined on a uniform basis, but *the intrastate shares to be paid directly to major local urban governments and to the State government itself would take account of the particular State's prevailing pattern of functional responsibilities and financing*, as reflected by tax revenue proportions.

With such an approach, it would be obviously desirable to avoid the possibility of drastically different treatment for individual governments just below and just above the size standard for eligibility; for example, one municipality of 49,900 and another of 50,100. This could be handled by graduating allowances for units of 50,000 to 100,000 according to the percentage by which their population exceeds the 50,000 level. On such a basis, the plan would be most fully helpful to municipalities and urban counties of 100,000-plus, and would provide discounted allocations for those with a population of 50,000 to 100,000.

The actual proportions of all funds going directly to States, as against major local units, would of course depend upon the weight applied to the "own tax revenue" portion of the intrastate formula. We have tested one such formula, under which the fraction of the total allocation to any State area that would go directly to eligible local governments would be as follows:

> (*a*) For each municipality or urban county of 100,000-plus population, 2 times the percentage relation of the government's own tax revenue to the total of State and local taxes in the particular State; and
>
> (*b*) For each municipality or urban county of 50,000 to 99,999, the product of (*a*) times the percentage by which the government's population exceeds 50,000.

With such a formula, judging by recent Census Bureau data, direct allocations to major municipalities would make up about 22 percent of the nationwide total, direct allocations to county governments would represent 13 percent, and the other 65 percent would go to the State governments. These proportions would naturally range considerably from State to State, depending upon their relative degree of urbanization and their governmental patterns and State-local tax arrangements. Some direct local allocations would be made in all the States except Alaska and Vermont (which lack any potentially eligible local units). At the other extreme, the local portion would be more than 50 percent of the State-local total in three States (New York, Maryland, and Tennessee) and between 40 and 50 percent in five States (Califor-

nia, Hawaii, Massachusetts, New Jersey, and Virginia.)[5]

In most of the Nation, obviously, a major part of all the federally shared revenues would flow to the State governments under this formula. However, a considerable part of the additional resources thus available to the States would be used by them—directly or indirectly—for increased grants to local governments. (Such grants already make up more than one-third of all State general expenditure.) And, needless to say, it is reasonable to expect that the major urban governments for which direct Federal revenue sharing is proposed would also participate in such increased State fiscal aid.

Implications for urban government structure

This suggested plan for selective direct Federal-local revenue sharing is deliberately "loaded" to favor general-purpose governments that are sufficiently large in population to give some prospect of viability as urban units. Earlier in this report we have emphasized the need for greater use of such relatively comprehensive local governments, in lieu of the layering and scatteration of responsibility found in so many metropolitan areas. A revenue-sharing plan of this nature should help to encourage State and local action in that direction, especially if the provisions for eligibility are designed to recognize changes in governmental structure: for example, population minimums should permit allowance for the effect of recent annexations and mergers, and creditable local tax revenue should be allowed for all of any group of units that might have recently merged.

Given such provisions, the system would offer some specific financial incentive toward desirable enlargement and functional consolidation of local government in urban areas. Many circumstances can be identified where eligibility for direct participation in the revenue-sharing system could be achieved or enlarged by municipal annexation action, municipal consolidations, city-county integration, intercounty consolidations, or the absorption by populous cities or counties of various "overlying" special districts which now exercise independent taxing power. The system would also provide some incentive for increased use of the county as an instrument for local school-taxing purposes, as we have previously urged.

The Federal Government has a clear legitimate interest in more rational and workable patterns of urban government structure, in view of the great difficulties which existing conditions create for effective intergovernmental relationships. On the other hand, the proposed revenue sharing plan would not be directly *coercive* toward structural change, nor—in view of its rather limited scale in relation to urban government financing—so generous as to provide an overwhelming incentive. This seems consistent with the view that *primary* responsibility for dealing with problems of urban government structure must continue to rest with States and local communities.

Some observers might question our proposal that direct sharing of Federal revenue should extend to large urban counties as well as to major municipalities. They may argue that counties in some parts of the country evidence low standards of competence. However, eligibility for major urban counties seems clearly desirable, mainly because of the marked variations that exist in the split of functional and financing responsibilities between cities and counties; the county's role (as a separate government) ranges from zero in certain cases up to a very significant portion of all local government in some other major urban areas. On the other hand, there is one rather widespread feature of county government that *does* demand attention in the revenue-sharing system. This in-

[5] Detailed data by states are as follows (with numbers of directly-aided cities and counties in parenthesis):

	Percent of total State-area allocation		
	State government	Major cities	Major urban counties
Alabama	75.3	12.5 (6)	12.2 (12)
Alaska	100.0		
Arizona	72.2	15.1 (2)	12.7 (2)
Arkansas	95.0	2.5 (3)	2.5 (4)
California	56.5	15.8 (41)	27.7 (25)
Colorado	72.9	16.2 (3)	10.9 (7)
Connecticut	70.8	29.2 (8)	
Delaware	79.9	12.1 (1)	8.0 (1)
District of Columbia		100.0 (1)	
Florida	67.2	12.1 (10)	20.7 (15)
Georgia	76.6	9.6 (6)	13.8 (8)
Hawaii	51.9	48.1 (1)	
Idaho	96.2		3.8 (2)
Illinois	71.5	20.7 (15)	7.8 (21)
Indiana	78.5	10.5 (9)	11.0 (18)
Iowa	85.4	6.6 (7)	8.0 (9)
Kansas	81.6	6.9 (3)	11.5 (6)
Kentucky	83.9	9.5 (3)	6.6 (7)
Louisiana	79.4	14.3 (5)	6.3 (9)
Maine	94.0	4.4 (1)	1.6 (5)
Maryland	38.9	27.8 (1)	33.3 (4)
Massachusetts	54.8	41.9 (19)	3.3 (9)
Michigan	70.8	17.5 (17)	11.7 (15)
Minnesota	75.7	10.7 (4)	13.6 (6)
Mississippi	84.0	11.7 (1)	4.3 (7)
Missouri	69.8	23.3 (6)	6.9 (8)
Montana	97.2	.4 (2)	2.4 (1)
Nebraska	79.3	13.6 (2)	7.1 (2)
Nevada	77.8	2.8 (2)	19.4 (2)
New Hampshire	86.9	10.5 (1)	2.6 (3)
New Jersey	55.0	23.3 (14)	21.7 (16)
New Mexico	86.5	11.4 (1)	2.1 (6)
New York	22.4	67.0 (15)	10.6 (20)
North Carolina	78.1	7.0 (7)	14.9 (10)
North Dakota	98.6		1.4 (1)
Ohio	68.9	19.6 (18)	11.5 (28)
Oklahoma	85.4	8.0 (3)	6.6 (6)
Oregon	79.6	9.3 (2)	11.1 (5)
Pennsylvania	71.7	19.6 (14)	8.7 (24)
Rhode Island	67.2	32.8 (4)	
South Carolina	92.9	2.4 (3)	4.7 (5)
South Dakota	95.8	1.2 (1)	3.0 (2)
Tennessee	47.0	26.1 (4)	26.9 (6)
Texas	71.5	18.7 (21)	9.8 (27)
Utah	81.8	8.8 (2)	9.4 (4)
Vermont	100.0		
Virginia	54.2	28.2 (8)	17.6 (5)
Washington	80.1	9.5 (3)	10.4 (11)
West Virginia	93.6	3.1 (3)	3.3 (4)
Wisconsin	79.4	12.8 (7)	16.8 (16)

APPENDIX G

THE CLASSIC THEORY OF LOCAL PUBLIC FINANCE

Local public debt theory did not have to be formulated until sub-national governments became active sellers of debt securities and the originally clear distinctions between public (or national) debt and private debt (all other forms thereof) became obscured in the process of economic growth and the rise of constitutional government.

The classical approach to local public debt theory only took shape toward the end of the 19th Century, following almost a hundred years of innovative experience with the unique federal structure of the United States and with the financial problems of the rapidly-growing cities in England and the Continent. We refer to the writings of Ely on local taxation, Bolles on the financial history of the United States, and H. C. Adams and C. F. Bastable on public finance. Ely in 1888 wrote of the paucity of literature in America on the subject of local taxation and finance, observed the emergence of well-researched treatises on political economy in Germany and

and other European countries, but praised a book which remains the foundation even for contemporary scholars such as James M. Buchanan:

> America has at last a work on one of the aspects of modern finance which can compare favorably with the [European] treatises mentioned above. I refer to the thoughtful and well-written work by Professor Henry C. Adams of the University of Michigan, entitled "Public Debts." Part III deals with state and local public debts, and it is needless to say that a treatment of debts is an essential part of any complete work on finance. The book is historical, descriptive, critical, and suggestive, and is in every respect admirable.[1]

As a foundation for our reappraisal of policy regarding State-local debt in contemporary conditions, we have distilled the Adams and Bastable treatises into seven major points. Their arguments are rooted in the work of Adam Smith, the Physiocrats, and economic thought as it developed through the 19th Century. They were among the first scholars to analyse the emerging role of the State and municipal sector in the United States, observing how institutions of local government first developed in Europe were modified by American law and custom and how events impelled municipal governments to undertake capital-investment programs that had been the responsibility of sovereigns in earlier times.

1.

> Public indebtedness, far more prevalent in the 19th Century than before, is a product of the development of responsible constitutional governments (less able to levy taxes and <u>corvées</u> at will) and of money market institutions serving a growing class of private investors.[2]

2.

A loan by itself is not a consumer of resources, merely a transfer of private wealth to a public body. The deflationary effects of postponed private consumption anticipated by Montesquieu, Hume, Adam Smith and Hamilton were shown to have been canceled out by the stimulating effect of public investment, while a Ricardo-Chalmers-Mill claim that wage earners were especially affected by public indebtedness was held fallacious.[3]

3.

The "spirit of socialism" abroad in the land exerts a profound impact, extending the functions of government from the protective to the developmental area and expanding the demand for capital funds whose burden is to be allocated over time over the relevant population.[4]

4.

Based upon analysis of (a) the social principles underlying different forms of taxation (i.e., apportionment in accordance with the theory of cost, the benefit theory, or the contributory theory) and (b) the administrative aspects of tax collection for different types of taxes (i.e., income and excise taxes versus real property taxes), a federal system has a special need to distribute sources of revenue appropriate to the functions to be performed by that level of government.

Adams goes so far as to suggest:

> "....since the payments are the greatest where the social relations are the most intense -- that is to say, in the cities -- .... there would seem to be some propriety in opening up to the cities as a peculiar source of revenue that fund of values which the growth and the life of the cities have caused to be created. Reference is here made to all forms of municipal monopolies."[5]

5.

Unlike the sovereign national and State governments, a municipal corporation can be sued on its debt, and thus its projects tend to be of a more considered and even productive nature. Although some of its tax and debt policies have similar social effects as those of a national government, its revenue potential and its organization are more akin to those of a private corporation than to a national government.

6.

A local government, however, functions both as an agent of the state and as a representative of its resident citizens; therefore, some public projects (such as schools) might properly be financed by loans from the state; projects more directly for the benefit of tenants and/or property owners (such as sewers) might be financed by bond sales to private parties.[6]

7.

There should be no need for refunding local bond issues to take advantage of lower interest rates, since local bonds should not be sold in periods of crisis (such as war) nor be of such long maturity that pronounced changes in business activity would create either opportunities for profitable refunding or high risks of default.[7]

Adams and Bastable understood but did not emphasize the two considerations that have characterized later investigations: the extent to which suburbanites can avoid municipal taxes but still enjoy the services of central cities; and the extent to which State-local finances and urban economic growth are affected by business cycles and the programs for full employment and economic stabilization that emerged in later theory and practice. It was clear to them, however, that the growth of urban America and the enlargement of the inventory of social wants to include education, waterworks, sanitary sewers, and transportation facilities would make municipal indebtedness inevitable, for no system of pay-as-you-go local taxation could provide the construction funds required, and no steady flow of either revenues or loans was forthcoming to cities from either federal or State sources. The most urgent improvement called for in the works cited thus far was for a higher quality of municipal management, based on citizen awareness of the fiscal dangers of overoptimism, fraud, and corruption.

The dangers of local mismanagement might thus be avoided, but no easy cure was anticipated for the paucity of municipal revenue sources in the federal system, although the States were gradually becoming aware of the new uses to which their credit might be put.

NOTES TO APPENDIX G:

1. Ely, p. 98. See Buchanan, Public Debt in a Democratic Society, p. 67.
2. Bastable, p. 550; Adams, Public Debts, p. 7 ff.
3. Bastable, Book V, Chapter V, p. 575 ff.
4. Adams, Public Debts, p. 17 ff; Bastable, p. 48 ff.
5. Adams, The Science of Finance, Chapters II and III; quotation Chapter VI, p. 492.
6. Adams, Public Debts, p. 361; Bastable, p. 631.
7. Adams, Public Debts, p. 307 ff.

APPENDIX H

COMMENTS ON POST-KEYNESIAN WRITINGS ON "PUBLIC FINANCE"

The new political economy

With Keynes came a renewed demand to provide full employment through national economic growth and to eliminate the "arbitrary and inequitable distribution of its wealth and income."

Following Keynes, the concepts of welfare economics were subjected to far more rigorous analysis than before as economists merged the ancient concerns for economic growth and equity in taxation with (a) more explicit treatments of decision-making in a democracy and (b) a higher aspiration level for public wants. Consideration of the literature of this new school of political economists is beyond the scope of this essay, but its central ideas are of great importance and relevance, representing development of what Edwin Seligman called a "social theory of fiscal science." Such theory is the foundation of definitions of the public purposes to be served by public expenditures in a democracy characterized by increasingly complex intra-metropolitan and inter-group relationships. (See, especially, works by Buchanan and Rothenberg.)

A determination as to when a "want" common to the members of a group is properly a "public" want is one of the major concerns of such social theory, for such a determination defines the nature of "public goods" and the amount of such public goods demanded by members of the body politic. The writings of the liberal economists suggest that America still has far to go in satisfying "public wants" for education, housing, an unpolluted and gracious environment, and so forth.

The definition of "public" involves the question of how the individual's preferences are respected by the body politic and the problem of achieving a Pareto optimality in a public program.

"Pure" theories of local public economics

The "pure" theories attempt to define "public" goods, distinguigh various types of such goods, and provide a rational basis for distributing resources to and within the "public" sector.

Samuelson's 1954 essay set out to provide firmer foundations for the spreading activities of government in the post-Keynesian days. His concepts have been continuously expanded, criticized, and adapted by Musgrave, Margolis, Tiebout, Williams, and others.

A pure public good is one that, if offered, will be available to all members of society, that cannot be withheld from any person, and that can be enjoyed fully by each person even though the number of persons benefitted increases. Pure air for breathing is a prime example of such a public good. Pure public goods have a zero marginal cost, which dictates a zero price and eliminates the possi-

bility of private investment to obtain it. Since everyone benefits equally, the costs of providing the public good can be apportioned by a per capita tax.

Unfortunately, most of the non-regulatory activities of government are providing benefits from which some members of society can indeed be excluded. Benefits may only accrue to one locality or one class of persons, and in many instances, there is no clear advantage to public over private operation. If a public agency makes the investment, it is confronted with the ancient problems of who may use the facility and how to finance it: whether by benefit charges, ability-to-pay taxes or fees, or general taxes. In all cases, borrowing is a way of spreading the burden of cost over the generations that will benefit from lumpy capital investments. Particular attention is given in the literature to the purposes of public expenditures by communities in the same metropolis who are in the position of spending for the benefit of non-residents or being affected by the externalities of investments (or lack thereof) in the other communities.

The work of these "pure" theorists is of interest to all those concerned with the propriety, the efficiency, and the redistributive effects of governmental expenditures, including the operation of enterprises for which market prices can be employed. Such "pure" theory, however, has not been addressed to the particular problem of an individual local government in a metropolis with limited access to funds for capital investment as distinguished from total expenditures, and thus the body of this literature is tangential to the subject of local public debt policy. Moreover, one recent writer (Williams)

points out that such "pure" theories have dealt only cursorily to date with the problem of localized goods that can be either public or private, while another analyst (Pidot) remarks that the "pure" theories, being static, are irrelevant or misleading for local officials involved with the heuristics of local administration.

APPENDIX I

ECONOMIC MODELS OF MUNICIPAL FISCAL RELATIONSHIPS

A. Models of the local finance problem

The models developed in this appendix approach a set of problems not yet tackled in the literature. The objective is to test the validity of some of the principles of "sound" finance and to explore the relationships that are felt to exist between different revenue sources, expenditures on current and capital account, bonds issued to finance capital expenditures, valuations of property for tax purposes, interest rates, and State restrictions. The models are simple, but the conclusions they suggest are building blocks for rational policies for municipal corporations.

Scores of economists have analyzed fiscal (and associated socio-economic) data by means of multiple regression programs to discover the revenue and expenditure patterns of urban communities.[1] What these empiric researchers have provided is a description of how suburban communities differ from central city populations. The theory implied in such research is that a given set of characteristics determine a municipality's fiscal allocations: IF one knows the

initial state variables concerning income, ethnic voting habits, age of sewers, etc., THEN one can predict for any community the size of its expenditures on schools, sewers, housing, etc. The inadequacy of this work for our purposes stems from its sector by sector accounting, its lack of discrimination of current from capital items, its cross-sectional analysis over metropolitan areas which make intercity comparisons misleading, and its lack of intuition as to how such local governments will meet the demand for high levels of service.

Whitelaw made a substantive contribution by being one of the few analysts to treat time series data in depth over an extended period for a single municipality, but his model, while rich in independent variables, still fails to consider the municipal budget as a whole.[2] He too looks for the ultimate model of the municipal budgetary function that incorporates what he called "an explicit simultaneous system of revenues and expenditures" and which he deferred examining because he found the constitutional and statutory constraints on borrowing "far too complex to place in a precise functional form." Yet, intuitively if necessary, local fiscal officers act as though such a budgeting system existed; it remains for the empiric researchers to describe such a local government function.

Far more relevant as an empirically-based finding to guide local officials is the evidence Margolis reported that shows that single-function districts have higher financing costs than general governments (and that independent school districts have higher financing costs than school systems operated as departments of general governments), providing strong arguments for use of general obligation bonds

issued by general governments wherever possible and for securing subsidies for social welfare facilities along the lines of the arguments presented in this dissertation.[3]

Studies of municipal debt management are also rare. Shattuck investigated the relationship of debt to property valuations over economic cycles in his critique of State restrictions.[4] Studenski recommended an ever-normal budgeting policy, with variations from the mean to be financed by the federal government.[5] The conventional views and standard practices are well covered in manuals for local finance officers.[6]

What is lacking, and what we attempt to provide, is a study of contemporary options available to a municipal general government, subject to the traditional constraints but caught up in the whirl of metropolitan politics in an era with a rising demand for public goods and services. The kind of comprehensive budgetary model required would take as inputs a PPBS report on a single function, a list of approved items for the capital budget (suitably ranked as to potential productivity), and all the other facts and figures about the fiscal position of the municipality, including secular trends with respect to its tax base. The required output is a balanced budget over the period, based upon judgments concerning the borrowing capacity of the municipality and the availability of intergovernmental grants-in-aid.

B. The equation for local fiscal equilibrium

The fundamental rule in municipal finance is that, over the short run as well as over time, total revenues must be equal or greater than total expenditures.

For the model developed below, the equilibrium sought is in terms of the present values of the flows of revenues and expenditures over a 20-year period, discounted at a 5 per cent rate. While one might argue for a five- or a 20-year moving average instead of the present value approach, the 20-year period is something of a benchmark in municipal bond reports, while the discount factor provides a familiar method of comparing financial flows over time. We assume that borrowing and lending rates are equal.

The revenue side of the local fiscal equation reports receipts from the following sources:

P = taxes on real property

Q = other tax and non-tax revenues

G_x = intergovernmental revenues toward current expenditures

G_c = intergovernmental grants toward capital outlays

B = total borrowings

Expenditure items in the model are allocated to the following accounts:

X = total current expenditures, excluding debt service and capital outlays

D = debt service on outstanding borrowings

C_g = construction outlays financed by intergovernmental grants

C_m = construction outlays financed by the municipality alone

The basic equilibrium can be expressed in the following form:

$$(1) \qquad P + Q + G_x + G_c + B = X + D + C_g + C_m ,$$

with each term being the present value of a 20-year stream discounted at 5 per cent. (The present value of one dollar a year for 20 years is $12.50, a factor employed in the model below.) Several identities may also be expressed with reference to the basic terms of the equation.

Property taxes are found by multiplying property valuation by a tax rate. For the model we assume true value (V) and an effective tax rate (r_t) as equivalent to actual assessed values and local tax rates. Thus, in each year's accounts,

$$(2) \qquad P = r_t V$$

Total borrowings are the sum of annual amounts of new debt sold in a year less amounts repaid, placed in sinking funds or otherwise escrowed against the day of maturity. In the model, total borrowings are subject to a limit prescribed by the State as a percentage (r_s) of true valuation. Thus, in each year's accounts,

$$(3) \qquad B \leq r_s V$$

Debt service is the sum of interest payments and sinking fund requirements in each year for each bond issue. Except as noted, bonds

in the model might be considered to have a 20-year term, with sinking fund at a 5 per cent rate, while interest is as set by the market at the time of sale and expressed here as r_m. Thus, in each year's accounts,

$$(4) \qquad D = (.05 + r_m)\, B = (.05 + r_m)\, (r_s\, V)$$

The present value formulation implies that the value of money is nonlinear but that the present values themselves can be represented by a linear accounting equation. The discussion below examines the manner in which some of the terms of the equation are interrelated and even intercorrelated in certain fundamental ways, but no attempt is made to introduce non-linear factors. One might argue in opposition to such a procedure; the effect of increasing population, for instance, may be non-linear along the lines sketched out by Baumol's analysis of unbalanced growth.[7]

In short, the basic problem is that each of the terms of the equation may be considered to be subject to determination by authority outside the control of the local government. For example, the character and amounts of intergovernmental transfers are established at the State capitol and in Washington, and, if such assistance is negligible, then G_x, G_c, and C_g will also be small. Moreover, the debt limit factor, r_s, and the market interest rate, r_m, are beyond local control, and even valuation, V, and the property tax rate may be established by a superior level of government, which may also restrict

the range of opportunities for obtaining the other tax and non-tax revenues in the Q category. To the extent that current expenditures, X, are mandatory in terms of object of expenditure, if not also in the level of service to be provided, and imply the need for some range of capital outlay, C_m, the local government's fiscal choices may indeed be narrow.

In the hands of a weak or unmotivated municipality, the fiscal equation will be nothing more than an accounting device, with the various rates and categories manipulated annually for fiscal balance. Almost any municipality, given a reasonably stable economic base, can exist within the set of exogenous restraints embedded in its particular set of fiscal factors, so long as it is willing to maintain current expenditures, X, at a low level and to minimize its exposure to the difficulties of capital outlays and resultant indebtedness. The strains come when standards are raised and when waves of social, economic, and demographic change engulf the community. Then the inherent intercorrelations in the data input into the equation and the interdependence of the accounting categories are highlighted in the annual reports of the city managers and in the literature of urban economics.

The equation must therefore be evaluated in terms of such changes. The growth of population and employment in a locality, for instance, will presumably cause property valuation, V, to increase, thus generating larger tax revenues and debt potential without change of rates. If population increases (say, as lower skilled persons migrate to the center city) but employment within the municipality

decreases (say, as industries move to the suburbs), the stability of V is in question, while the possible yield from other sources, Q, depends upon the incidence of such levies on residents and non-residents.[8] As noted, the municipality's ability to finance capital outlays may be importantly determined by intergovernmental grants, while intergovernmental assistance may also be required to support the additional services deemed necessary. Meanwhile, an increase in the scope and level of goods and services provided, as represented by C and X in the model, may stimulate economic development in the locality, but it does not follow thereby that property values, V, will rise, for the means of increasing C and X may have required increases in tax rate, r_t, and other taxes, Q, and contributed to the flight of higher income families to other jurisdictions with a more felicitous mix of goods and services.

Thus the dispersion of authority over the activities represented in the accounts, the ultimate interdependence of one factor with the others, and the particular shape of the basic political and economic forces in the community must all be recognized by the individual city budgetmaker. The degree to which a given type and amount of municipal expenditure or impost will generate positive or negative change in the unique environment under investigation by a local finance officer may be exceedingly difficult to trace and measure except in such qualitative terms. The purpose of the model, however, is to throw light on the relationships that might be found for any individual municipal corporation for which data are supplied.

The model is not designed to analyze the multi-governmental environment of the metropolis, where a set of differentiated, competitive governmental entities become the object of concern (as in the writings of Wood, Rothenberg, and many others). The model, however, is related to the work of researchers who have attempted to correlate socio-economic characteristics of the residents with the expenditure patterns of their cities and towns (as in the writings of Brazer, Sacks, Schmandt, and others), for we must make the assumption here that the city managers using the equation already know the pattern of suburban differentiation in their metropolises and the social, political, and economic forces that combine to determine the mix and level of expenditures. The question is to determine, as best they can, the trade-offs between taxes, borrowings and grants-in-aid in a comprehensive budget.

C. Graphic analysis of fiscal factors in local equilibrium equation

Before we insert quantitative data into the equation introduced in the preceding section, it is useful to provide a more sensitive qualitative basis for the discussion. We may do this by tracing analytically the revenue and debt effects generated by a decision to increase the amount of construction outlays in the accounts of a single municipal corporation. The effects are linked in the manner represented in Figure 15 below, where the direction of the flow of effects is from the vertical of C (construction outlays) to the to the left for revenue effects and to the right or clockwise, for the debt effects. The diagram suggests that, although every factor affects every other factor in the realm of municipal finance, a persistent pattern can be described by which the effects are made manifest.

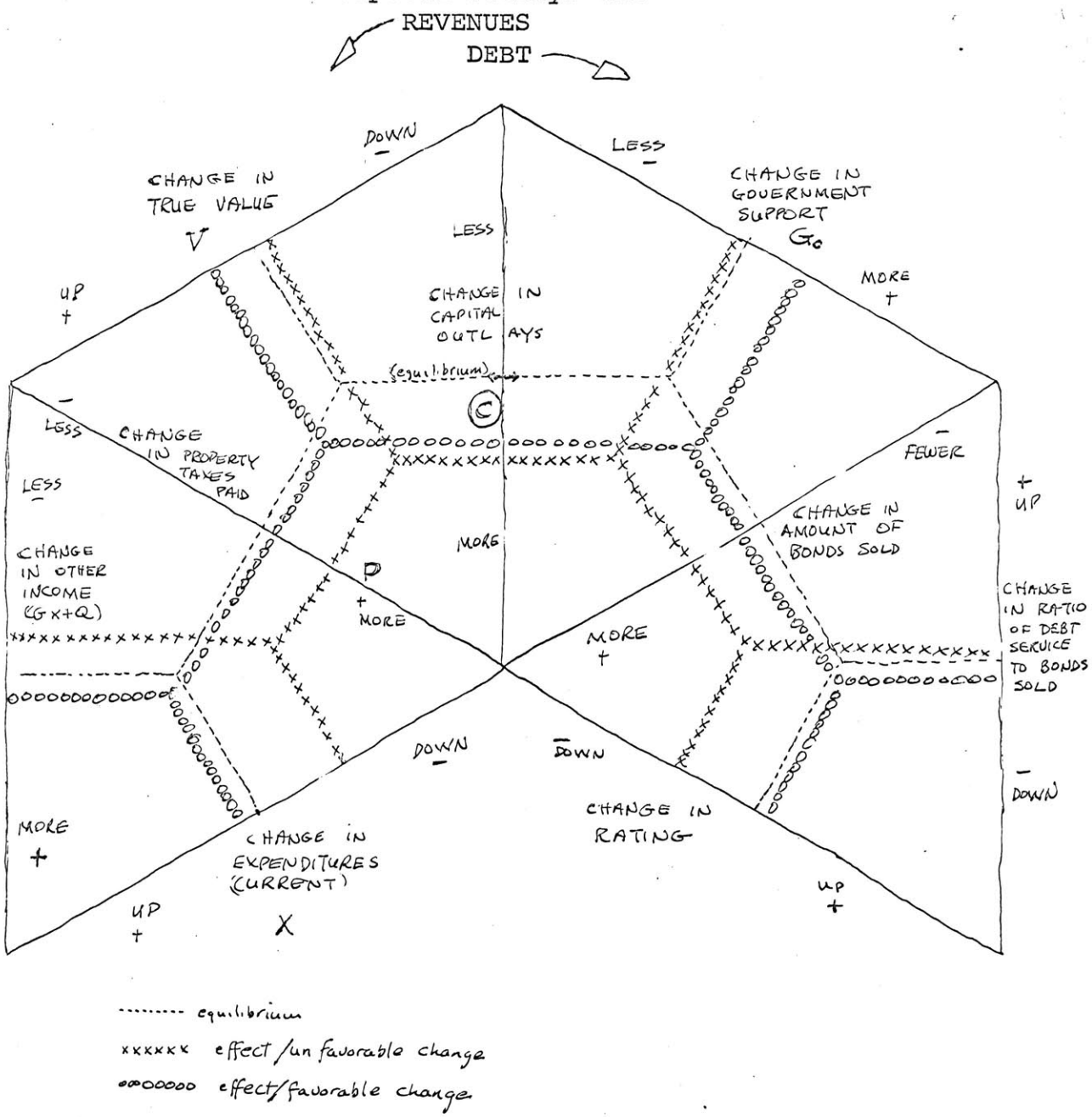
In Figure 15 there can be found four tripartite relationships, denominated by the same terms defined in the preceding section. The dotted lines through the midpoints of the sides of the triangle indicate the equilibrium points established for the individual municipal corporation that the model represents, with a positive or negative change to be reflected in the direction indicated.

We begin with the requirement that C increase from the equilibrium point, considering first the effects on debt.

In the most unfavorable situation, as shown by the xxx-line, no further intergovernmental grants, G_c, are available to help finance the increase in capital outlays, C, and the burden thus falls on B, borrowings. If B increases, there is a tendency for

FIGURE 15

Chart of Dynamics of Fiscal Equilibrium for a Municipal General Government



the municipality's bond rating to fall, thus increasing the debt servicing burden, D, for a given level of B. Now, with regard to the revenue effects of this situation, also shown by the xxx-line, the increase in C and D, given a property base, V, that has not increased proportionately with the expanded needs of the municipality, will require a relative increase in property taxes, P. The effect of higher property taxes, moreover, may be a fall in the Q portion of other revenues as some economic activity and higher income persons flee the city. It follows that,if property taxes must rise to service a larger amount of borrowing, and if the combination of G_x and Q is stable or falling, current expenditures, X, will be severely constricted, if not actually decreased in scope and effectiveness.

In more favorable circumstances, the scenario allows the posited increase in capital outlays, C, to be matched by some increase in inter-governmental grants, G_c, requiring only a small amount of new bonds and generating only negligible effects on debt service burden and rating. The increase in C, moreover, may be optimistically held to stimulate growth in property valuation, so that the increase in property tax rates in relative terms is unnecessary. In such a case, P remains in equilibrium with the combination of Q and G_x, with the further possibility that economic stimulation will support a desirable increase in the level of current expenditures, X.

The shaded area on the diagram suggests the range of effects, and some useful intuitions can be gained by choosing some other category than C as the initial source of change, observing the

range of positive and negative changes that follow from subsequent assumptions required to obtain a new equilibrium position.

D. Empirical data in the local equilibrium equation

In this section, we insert representative data into the basic equilibrium equation in preparation for an exploration into the parameters of valuation, debt, intergovernmental assistance and the other factors brought together by means of the diagram in the preceding section.

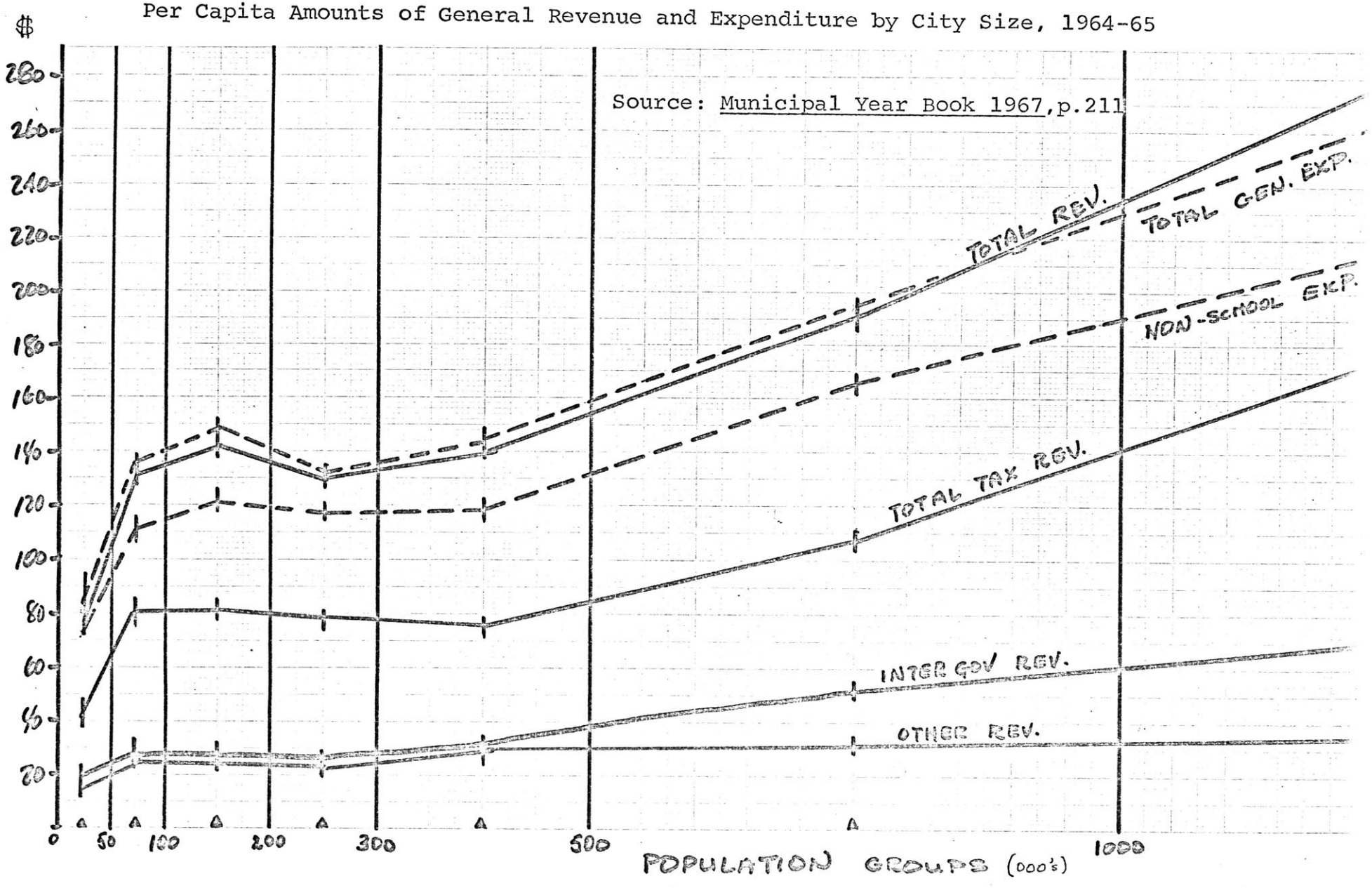
The data employed for the discussion are taken from the annual municipal financial reports collected and analyzed by Manvel of the Bureau of the Census.[10] Figure 16 shows how the estimated 1964-65 data for all cities change on a per capita basis by size of population.

The example case is based on data for the 300,000-499,000 size group, and we shall assume in the first instance that constant dollars are represented and that the same amounts are received and spent each year in the 20-year period. As calculated in Table 5, the present value of local accounts for 20-years discounted at 5 per cent are: current expenditures of $1,300, debt service of $275, Capital outlays of $375, financed by property taxes amounting to $625, other taxes and charges of $725, intergovernmental revenues of $375, and borrowings of $225. Differential trends in the data are not reflected in these totals, since the 1964-65 data were merely repeated for each of the future years.

These estimated data are in acceptable ranges. An average valuation of $2,500, for instance, at 2 per cent effective tax rate, produces the $50 per capita figure that was derived from the published figures, while the scale of the effective tax rate itself is well corroborated by Census surveys as to the relation of true

FIGURE 16

Per Capita Amounts of General Revenue and Expenditure by City Size, 1964-65



Source: Municipal Year Book 1967, p.211

FISCAL EQUILIBRIUM FACTORS, TYPICAL CITY, PER CAPITA BASIS — TABLE 5

Factor	Present value of 20-year stream, discounted at 5%	Per capita amounts, annual basis
REVENUES		
Property Taxes		
$P = r_t V$ (=2% on $2500)	$ 625	$ 50
Other Revenue		
Q	725	58
Intergovernmental Revenue		
$G = G_x + G_c$	375	30
Borrowings		
D $r_s V$ (=9% on V=$2500)	225	18
	$1950	
OUTLAYS		
Expenditures		
X	1300	104
Debt Service		
$(.05 + r_m)(r_s V)$, equivalent to interest of 4% on debt of $225 plus sinking fund payment of 5% on $225.	275	22
Capital Outlays		
$C = C_g + C_m$, where annual borrowings are 18/30 or about 60% of capital outlays.	375	30
	$1950	

value to tax receipts.[11] The $2,500 per capita valuation, in turn, given debt of $225, suggests a 9 per cent ratio of debt to valuation, also in the range of State constitutional and statutory maxima. Moreover, the $225 debt figure itself is in line with the estimate of per capita debt derived by allocating to the class of cities above its proportionate share of reported debt and converting to a per capita basis.[12] Since approximately one half of capital outlays by State-local units have been financed by bond issues in recent years, according to the Joint Economic Committee study, the calculated 60 per cent ratio of borrowings to outlays also appears reasonable for the example case.[13]

The most egregious variation between the proto-city suggested by the data and an actual municipality in the size class would probably be found, as suggested by Manvel's report, in the category covering educational services and facilities, for only 10 of the 43 cities in the 200,000-499,000 size group operate their own ("dependent") school systems; education is handled by independent school districts in the other areas. Thus only one-quarter of the revenue and expenditure items devoted to education are reflected in the group data employed in the example above; were the school district budgets included, the sums given would rise proportionately in every category.

E. Parameters in a theory of borrowing

We are now in a position to begin exploring the relationship between the gross categories employed in the model. This procedure is the reverse of the usual approach, whereby each category or object of expenditure is examined individually but where the total budget that the sum of the parts represents is rarely considered as a whole.

More specifically, we shall use the equilibrium model to understand the means by which significant expansions in the expenditure and capital outlay categories can be financed, given the rules of the municipal game and the observed limitations in the expansion of revenues from property tax and other sources.

In the following discussion, the dollar figures are considered to be in real or constant dollars, so that the effect of changes in the relative amounts of factor inputs can be observed without reference to changes in the price level and thus in terms of resource allocation alone.

Long-term borrowing to finance current expenditures

In the first application of the model, we seek a definitive explanation of why current expenditures cannot be financed by borrowings, except for very short periods when there is a reasonable expectation of support from intergovernmental sources or local tax sources. We begin by assuming that no further revenue can be expected from local taxes on existing real property or from further non-property taxes and charges. The reasoning behind such a constraint is reflected in real world situations where taxpayers no longer are willing to raise taxes to pay for desirable new public services but will vote in

favor of such referenda as the proposed Watson amendments that was narrowly defeated in the California election of 1968.[14] We assume, in addition, that the example city has exhausted its capacity to levy non-property taxes and to set charges for services without precipitating deleteriously higher rates of suburbanization of employment and residences. The burden of financing is thereby placed on intergovernmental revenues and long-term borrowing. In later explorations, we shall observe the effect of assuming a rise in valuation and economic activity so that increases in property taxes and other revenues can be generated.

On the expenditure side of the equation, we assume that our representative community has adopted fixed policies whereby current expenditures, X, will increase at the compound rate of 5 per cent a year and capital outlays will increase at the compound rate of 10 per cent a year. In fact, such increases are not beyond the experience of communities in recent years, especially in cases when the physical plant of the city has been neglected and the provision of welfare services has lagged.

Evaluating the present value stream of the assumed rates of change in the equation, as was done in Table 5, provides the following set of values for the equilibrium equation:

Property taxes	P	$ 625
Other revenue	Q	725
Intergovernmental rev.	G + g	375 + g
Borrowings	B + b	225 + b
		$1,950 + g + b

Current Expenditures	X	2,080
Debt service		275 + d
Capital outlays		1,015
		$3,370 + d

where g, b, and d represent the incremental amounts required to balance the fiscal accounts of the community.

Thus, the present value of expected outlays over the ensuing 20-year period has risen to $3,370 per capita, plus the amount required to service the additional debt (if any) incurred over and above existing indebtedness.

Having assumed that property taxes based on existing valuation and other revenues remain invariate, P and Q remain at $625 and $725 respectively, while the burden of financing the larger amount of current and capital outlays is put on additional intergovernmental subsidies (g) and on additional borrowings (b). In summary, the deficit to be financed in this assumed situation is equal to [$3,370 + d] less [$1,950 + g + b]. Thus, to obtain fiscal equilibrium,

as must be done,

$$\$1,950 + g + b = \$3,370 + d$$

(5) $$g + b - d = \$1,420$$

At one extreme, all the additional funds might come from intergovernmental sources; thus g would equal $1,420 and d and b would be zero. Total intergovernmental funding would amount to $1,420 plus the existing $375 or $1,795, a total amount that is 4.8 times as great as in the basic example.

Where the equation is easily balanced by the provision of intergovernmental funds or tax revenues, the model "blows up" at the other extreme, the case where no further intergovernmental assistance (or tax or other revenues) are forthcoming. The performance of the model under these extreme conditions is analyzed below.

With incremental g equal zero, the equilibrium equation in present value terms becomes:

(6) $$b = \$1,420 + d$$

In the example, we have allowed X and C expenditures to increase steadily, with P and Q revenues constant, creating a substantial deficit to be covered by additional revenues. Borrowings, although they are a source of funds, are not considered as a source of "revenues" since they must be repaid at interest.

We apply the discount rate to both the annual interest payment and the annual repayment of principle (and do not earn interest on a sinking fund). Therefore "d" as the present value of interest and repayment of principal will always be greater than the principal sum of bonds alone. It follows that it becomes

impossible for "b" to equal "d" plus a constant sum such as $1,420 as in equation (6) above.

The algebra of the model shows how borrowings to cover current and capital outlays require further borrowings to pay for interest and refunding ad infinitum, so long as no other sources of revenue are available. The "blow up" of the model occurs because of the assumption that the city fathers could allow expenditures on current and capital account to escalate each year without the support of a proportionate increase in property and other tax and non-tax sources. The model in this case has merely dramatized the effect of drift in municipal affairs when expenditures are forced for political reasons to increase year after year in situations where the increases in tax and non-tax revenues are limited, in which case intergovernmental subsidies become essential.

Borrowings are shown to be feasible only when sufficient current revenue is available to cover interest, while additional revenues are required for sinking fund purposes unless it is possible for the municipality to rely upon refunding maturing debt issues whenever funds are required. The possibility of refunding is quite clearly, however, a function of the municipality's success in keeping its ordinary sources of revenue in good repair and in maintaining an attractive and efficient physical environment which stands as proxy for mortgaged property in the mind of the bondholder.

In the next example, we relax the constraints concerning increases in revenue from ordinary tax and other sources and consider the degree to which increases in property valuation,

together with additional intergovernmental fundings provide a firmer basis for larger borrowings and for estimating the amount of current and capital outlays financeable. In this second case, however, intergovernmental subsidies will be the dependent variable, to be estimated as an amount required to balance the budgets, after a given amount of debt has been incurred and debt service reserves established. If such intergovernmental supports are not to be anticipated, the municipality will be forced to curtail its proposed outlays proportionately.

F. Implications of a growing tax base

In this next example, we relax some of the constraints and look only to intergovernmental subsidy as the balancing factor, a procedure that enables us to gain some further perspectives concerning the way in which growth of the tax base is a critical variable, furnishing a new basis for determining the size of capital outlays and borrowing programs. The procedure by which resort is made to higher levels of government may, indeed, accord with practices in the real world, for the model suggests that borrowings tied to property valuations may tend to lag behind the need for capital funds that are presumed to increase exponentially as in the example.

The results of the two sets of assumptions at work in this example are partially illustrated in Figure 17. In both cases, X and C have been allowed to increase at the same rates (5 and 10 per cent respectively) as before. In addition, in both sets, other revenues, Q, were allowed to increase at a more modest 3 per cent compound annual rate over the 20-year period.

The major difference between the two cases illustrated in Figure 17 is in the growth assumed for true valuation, V. Set 1 represents the consequences of a one per cent compound growth rate in valuation; set 2 is based on a two per cent rate.

The procedure followed involved a re-estimate of property tax revenues at a rate of two per cent of V, a re-estimate of borrowing capacity a 9 per cent of the annual increase in V, and calculation of debt service on the cumulative amount of bonds outstanding at the same rates as before: 20-year sinking fund payments and 4 per cent

interest. Then governmental subsidies, G, were calculated as the equilibrating mechanism. (Data in Table 6.)

Under the assumed conditions, as Figure 17 shows clearly, the increase in taxable valuation dramatically decreases the gap between borrowing power and the amount of intergovernmental funds required to support a given level of current expenditures and capital outlays (which are also graphed on the figure).

The unanswered question for American municipal government is the extent to which such intergovernmental transfers are to be available on a continuing and expanding basis in the future. For comparison the 10 and 12 per cent compound growth curves for G have also been plotted in Figure 17.

Also for comparison can be found the graph of one-half of total project capital outlays (the graph of the total projected capital outlays lies fairly along the 10 percent G curve). As noted previously, one half of C is the proportion of State-local capital outlays financed by the sale of long-term bonds in recent years. The one per cent rate of growth in valuation is sufficient to finance one-half of the 10-percent rate of growth for capital outlays assumed for the example for two-thirds of the period, while at the two per cent rate in growth of valuation, bond capacity is in excess of a demand to finance half but insufficient to finance all of the projected capital outlays.

The condition evident here is that factor mobility, with both P and Q able to increase in size, has generated a number of benign effects. The municipality's reliance on G is reduced but hardly

FIGURE 17

GRAPHS OF CALCULATED VALUES, EXAMPLE CASE, BY YEAR 1-20

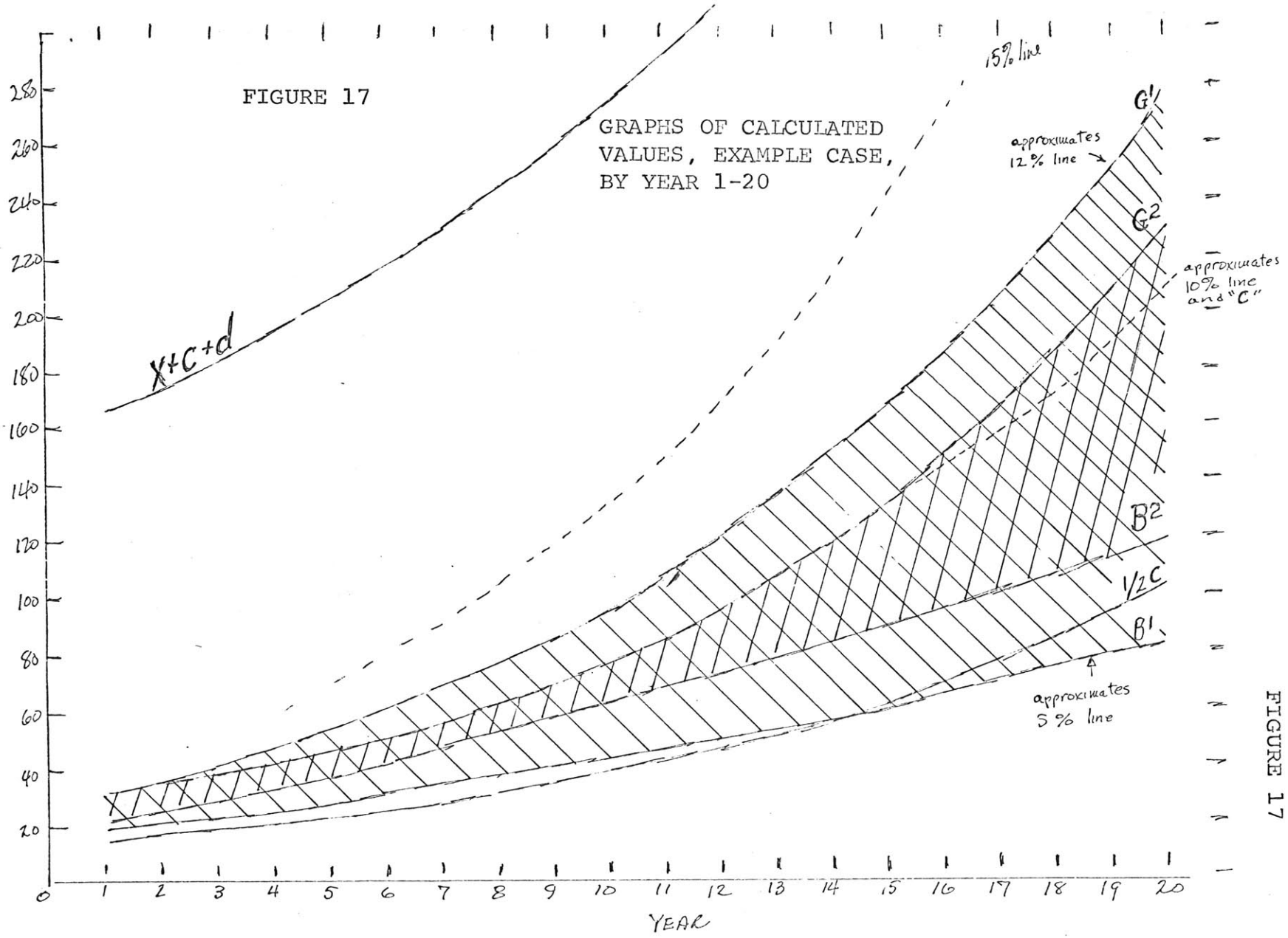


FIGURE 17

DATA FOR 20-YEAR PERIOD, EXAMPLE CASE

TABLE 6

	5% DISCOUNT FACTOR	$(C+.10C)^n$	TOTAL OUTLAYS (Q+P+B+G)	Q	P′	P″	B′	B″	G′	G″
1	.952	$ 33	$ 164	$ 60	$ 50	$ 51	$ 20	$ 22	$ 34	$ 31
2	.907	36	174	61	51	52	22	26	39	35
3	.863	40	184	63	52	53	24	30	45	38
4	.822	44	194	65	52	54	26	34	51	41
5	.783	48	206	67	52	55	29	38	57	46
6	.746	53	218	69	53	56	32	43	63	50
7	.710	59	232	71	54	57	35	48	70	56
8	.678	65	246	73	54	59	38	53	80	61
9	.644	71	261	75	55	60	41	58	88	68
10	.613	78	276	77	56	61	44	63	97	75
11	.584	86	295	79	56	62	47	68	111	86
12	.556	94	313	82	57	63	50	73	122	95
13	.530	104	332	84	58	65	53	78	136	106
14	.505	112	353	87	58	66	57	83	149	117
15	.481	126	378	90	59	67	61	88	166	133
16	.458	138	402	92	60	68	65	93	183	149
17	.436	152	428	95	60	70	69	99	202	164
18	.415	168	458	98	61	71	73	105	223	184
19	.395	184	488	101	62	72	77	111	246	204
20	.376	202	523	104	63	73	81	117	272	229
	12.500									
		$1015	$3400	$942	$655	$714	$523	$711	$1284	$1030

PRESENT VALUE SUMS

Note: PV of P=$50 for 20 years at 5% is 12.500 x $50 = $ 625
PV of Q=$58 " " " " " " " x $58 = 725
PV of $(X+.05X)^n$ " " " " " " " x$105 = $2080

eliminated; borrowing capacity exceeds half of the projected need in the early years, but falls increasingly short as the outlay curve rises exponentially; and, because the bonds outstanding are added sequentially, debt service builds up more slowly in present value terms than in the first example where all the bonds were sold at the beginning of the period.

G. Implications of changing factor inputs on interest rates

Interest rates remained invariate in the examples we have considered thus far. In this section we reconsider the impact of changes in the amounts and purposes of borrowing by a municipality, and we attempt to provide an explanation of the forces changing the interest rate demanded by the market on securities sold by the municipality. The extent to which the volume of bonds issued is responsive to changes in market rates is considered elsewhere,[15] but, with respect to the model employed here, the reader can observe that interest costs by themselves, not including repayment of debt, are relatively small compared to the amounts given for other current expenditures.

Financing of capital outlays through debt financing has been of greater interest to the Advisory Commission on Intergovernmental Relations than to the writers on public finance theory and on metropolitan affairs generally. Labovitz and Ecker-Racz have stated that one of the major findings of the intergovernmentalist researchers concerns the inverse relationship between the interest rate on borrowings and the tax effort index for the particular jurisdiction, another way of saying that the use of tax revenues for capital outlays decreases the need to borrow and increases the community's bond credit rating.[16]

Whitelaw ignored long-term borrowing in his extraordinary time-series data, although the prevailing level of municipal bond interest rates appears as one of the independent variables.

The relationship between relative interest rates and two ratios internal to a given municipality's fiscal situation is shown in Figure 18. The term relative interest rate may be taken in the sense that a municipal credit rating is associated with interest rates that are higher or lower than the prevailing average market rate for municipal bonds of a given type. The two ratios are (1) borrowings in relation to total valuation (B/V) for the given municipality and (2) total borrowings in relation to total capital outlays (B/C). To the extent that the interest rate, r, for bonds with the same maturity implies a level of debt service, d, the two may be considered interchangeable in the argument below.

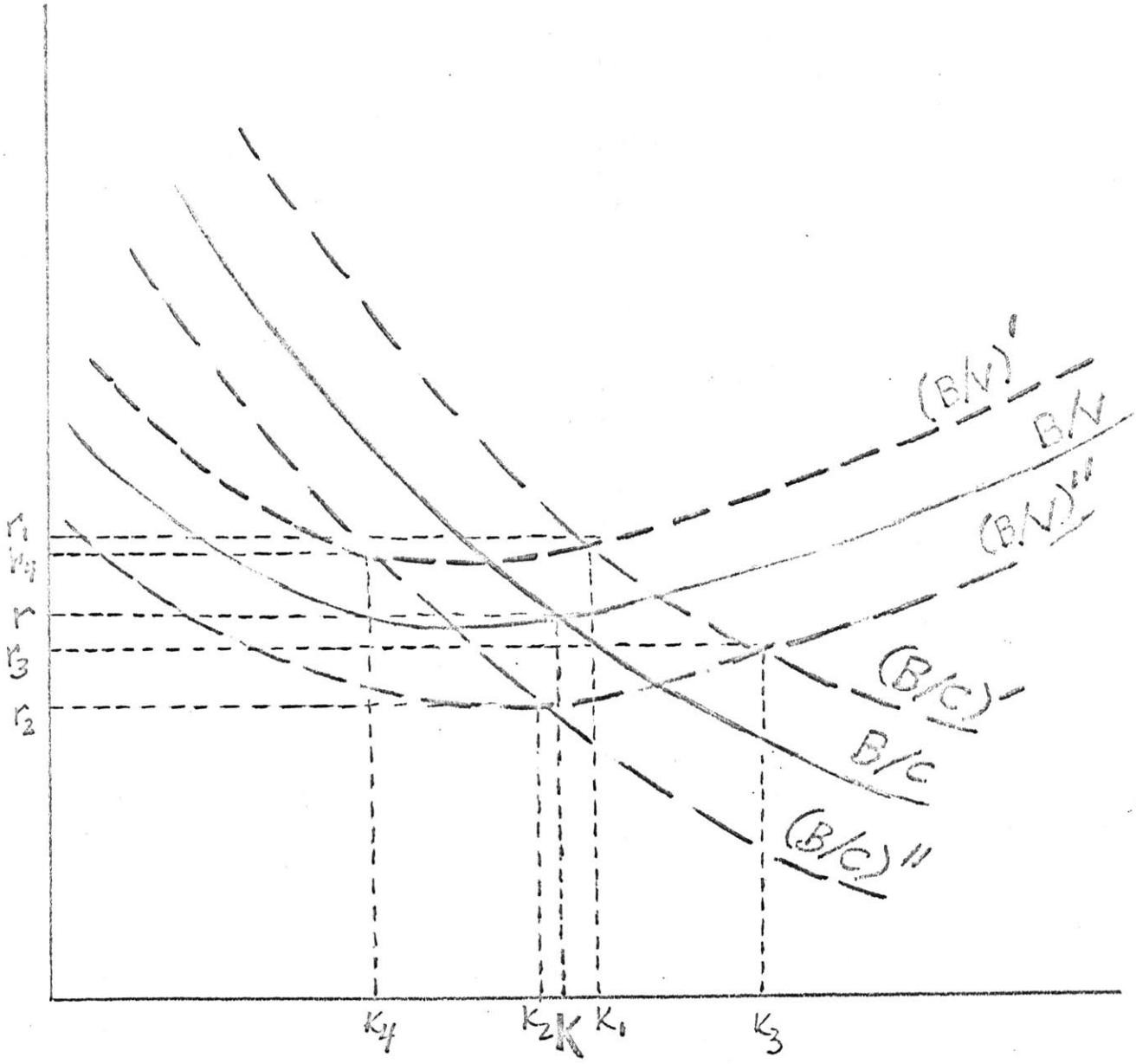
The shape of the B/V curve is shown in Figure 18 to be somewhat similar to a production cost curve. For smaller cities where the volume of bonds is never large and which are sold in what are known as regional markets rather than the general market for municipal securities, the interest rate is somewhat higher than for larger and/or better-known issuers.[17] By the same reasoning, interest rates for medium-sized cities just beginning to enter the market with small-sized offerings tend to be penalized as unknowns by slightly higher interest rates.

As the amounts of bonds outstanding become higher percentages of valuation, however, the interest rate imposed on new bond issues tends to be increased, either as a premium supposedly related to a higher risk of default or as a result of some other rationalization for a lower bond rating.

The shape of the B/C curve is shown to be somewhat similar to a

FIGURE 18

Analytic Diagram of Relationships between Interest Rates, Bonds Issued, and Property Valuation



demand curve. As the proportion of capital outlays to be financed by bonds falls, in other words, as the demand for bonds diminishes for a given level of capital outlay, the urgency underlying the municipality's approach to the market also diminishes, with a consequent decrease in the interest rate demanded of or acceptable to the municipality.

At the point of equilibrium for the given municipality, its unique B/V and B/C curves are assumed to intersect to generate an interest rate, r, and a quantity of bonds, k. A general policy to increase the percentage of capital outlays financed by bonds would tend to shift the B/C curve upward, and a general policy to allow bonds outstanding to represent a higher percentage of the tax base valuation would tend to shift the B/V curve upwards as well. The opposite policies would have the opposite effects.

As the equilibrium is disturbed by such changes in policy, four new equilibrium points can be generated, as shown in Table 7.

Interest rate increases are found at the intersection of higher (B/V)' and higher (B/C)', with the amounts of bonds involved also increased, and at the intersection of a higher (B/V)' but a lower (B/C)", in which case borrowings decrease. The inference in the latter case is that the valuation base is lagging; hence even the lower bond sales implied by (B/C)" are dominated by the deteriorating credit ratio (B/V)'.

Interest rate decreases are associated with a lower (B/V)" and a higher (B/C)', again with the inference that a change in (B/V)" is more significant than the change in financing policy (B/C)". It then follows that the intersection of the same lower (B/V)" condition with

lower (B/C)" policies would be associated with lower interest rates and smaller amounts of borrowing.

TABLE 7

MATRIX OF RELATION BETWEEN INTEREST RATES, BONDS ISSUED, AND VALUATION

	HIGHER = (B/V)'	LOWER = (B/V)"	effect
HIGHER = (B/C)'	r_i up k_i up	r_3 down k_3 up	k's up
LOWER = (B/C)"	r_4 up k_4 down	r_2 down k_2 down	k's down
effect	r's up	r's down	

By means of Figure 19, it is now possible to consider how different patterns of borrowing affect interest rates demanded by the market. The patterns represent different mixes of bond types as well as different amounts of bonds sold and outstanding.

In Figure 19, the general shape of the interest rate curves is the same as for the B/V curves in the preceding Figure 18, and the

bonds in the B/V ratio can be said to be equivalent to those issued by the municipality as its general obligations (GO's), secured by the full faith and credit of the municipality's taxing authority.

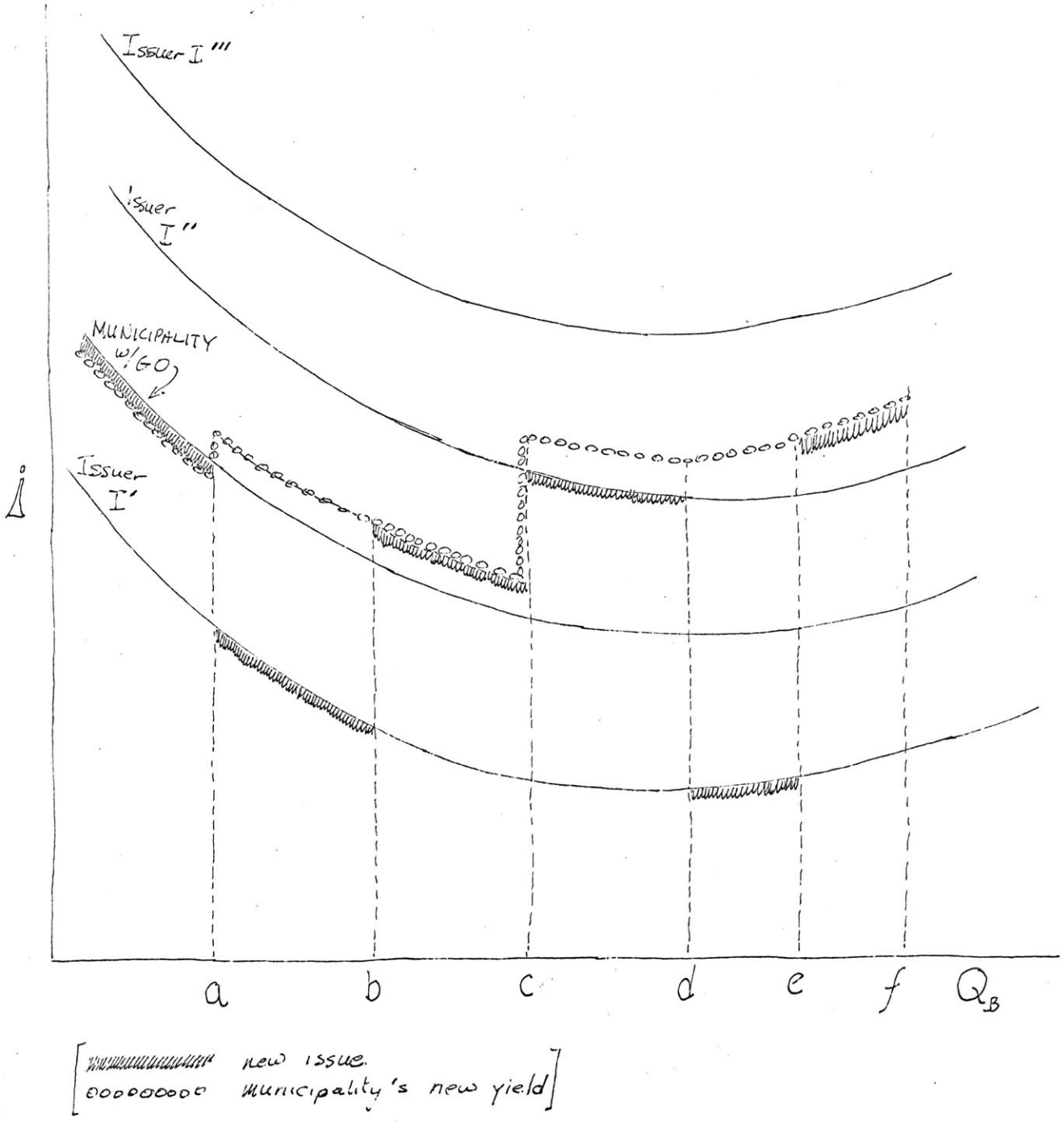
The bond market, however, is confronted with a variety of different types of bonds associated with a particular locality. Some are GO's or other bonds issued by the municipality itself. Some are GO's issued by coterminous governmental units such as school districts. Others are GO or limited guarantee or revenue bonds issued by coterminous or regional governmental units. The concept of a community's overlapping debt is usually expressed in per capita terms, attributing to each citizen the sum of his proportionate burden from each of these separately-constituted issuers.

The interest rate demanded by the market for the general obligation bonds of a given community is a function of the market's perception of how overlapping debt (from Issuers i, ii, and iii) affects the ability of an individual taxpayer to provide funds for debt service on the various issues. No quantitative research has been done on this subject to date, so far as this writer is aware, but the subject can be approached qualitatively in terms used by bond underwriters to explain the ratings and rates given different types of issues in the same locality.

The reasoning of the market is shown in Figure 19, where GO is the interest rate curve for the municipality's general obligations, and I' is the interest rate curve for some bond issue included in the overlapping debt category. This I' curve is characterized by lower-interest rates than the municipality's own GO curve because

FIGURE 19

Observed Effect on Relative Yields on a Municipality's Indebtedness with New Issues of Overlapping Debt



of a higher bond rating which might be merited for any of a number of credit factors. Similarly, I" and I"' are curves for other issues, less favorably rated, by other borrowers in the locality.

The municipality's interest rate appears to be set on a first-come first-served basis. If related Issuers i, ii, and iii sold bonds first, the rating given to the general obligation sold thereafter by the municipality might vary widely from the rating that the municipality's same GO's might have been given if they had been sold before any of the competing but complementary issuers had entered the market. It must also be noted that the mix of activities supported by general obligations in one municipality may be very different from the mix financed by another municipality, even when both are located in the same State.[18]

In Figure 19, however, the municipality's general obligation bonds have come into the market first, with the rate curve falling slightly as the volume of total or overlapping debt in the locality increases from the origin to point "a".

When Issuer i with his I' rating sells bonds along the I' curve and increases overlapping debt from "a" to "b," the municipality's outstanding bonds are shown to fall slightly in rating and hence in price as the yield on them in the market increases. Thus when the municipality comes into the market with new bonds, moving the quantity outstanding from "b" to "c," it must sell them at the slightly higher yield basis demanded.

The next contributor to overlapping debt is assumed to be Issuer ii whose credit rating is lower than either the municipality

or Issuer i. Issuer ii is able to sell its bonds on the I" curve, but the response to the size of overlapping debt as the quantity outstanding now moves from "c" to "d" is assumed to be unfavorable.

In the example, however, Issuer i comes into the market again and is still able to sell bonds at its prime rate, as the quantity outstanding moves upward once more from "d" to "e." When the municipality again enters the market with new bonds sufficient to move the quantity of overlapping debt from "e" to "f," it finds the unfavorable response of the rating agencies has forced its market rate above the I" line, while the value of its outstanding securities has been depreciated in the hands of holders as a result of the change in market rating.

The concepts developed in this study suggest that the amount of bonds issuable by a given municipality is not easily established in either theory or practice. The discussion of Figure 19 indicates that the amount of bonds sellable by a municipality is a function, not only of how it manages its own affairs but of the competition vis-a-vis the market by issuers in its locality that make its own bonds more or less acceptable in the market.

NOTES TO APPENDIX I

1. For discussions, see the Whitelaw and Kee dissertations.

2. Although his model includes budgetary constraints.

3. See Margolis.

4. Shattuck also shows how other policies, such as insistance on on level debt service, affect the amounts that can be borrowed.

5. Studenski, Public Borrowing.

6. See International City Managers Association, also Chatters and Hillhouse in bibliography.

7. See Baumol in bibliography.

8. For a good study of this relationship, see Fiscal Planning for an Urban Community under U. S. Dept. of H.U.D. in bibliography.

9. See Note 1 above.

10. In Municipal Year Book 1967.

11. See "median effective tax rates" for 122 cities in U. S. Census of Governments - 1967, Vol. 2, "Taxable Property Values," p. 15.

12. Data in Manvel's essay in Municipal Year Book 1967.

13. See U. S. Joint Economic Committee, Vol. 2, Financing, report by A. H. Diamond and Chapter 2.

14. See Note 5, for Chapter 1.

15. See Appendix K; also Joint Economic Committee, Ch. 18 (McGouldrick).

Footnotes continued on following page.

NOTES TO APPENDIX I

(continued)

16. See Note 5, for Chapter 1.

17. See Joint Economic Committee study, Vol. 2, Ch. 16 on credit problems of small municipalities.

18. No studies are known to the author concerning the effect on one issuer of bonds issued by an agency whose jurisdiction overlaps the first. The argument for Figure 19 is an attempt to visualize the process.

APPENDIX J

THE DEFAULT RECORD

The chief analysts of the municipal bond rating agencies have frequently remarked in recent years that the simplest part of their job is estimating the probability of default for a given bond.[1] Reference is made to the resources currently available for stabilizing the general economy, to generally higher standards of municipal administration than prevailed during the 19th Century, and to greater knowledge for both issuers and investors concerning the likelihood of the necessary future economic growth in a locality to generate adequate tax revenues for satisfactory debt service.[2]

The default record of a century of municipal bond finance, as compiled by Hillhouse during the 1930's encompasses: (a) the first recorded default, Mobile, Alabama in 1839, (b) minor troubles before the Civil War, (c) a fifth of all municipal bonds affected during the post-Civil War period to the early 1880's (with Carpetbagger frauds a special form) (d) a rash of problems in the 1893 financial crisis, (e) a few real estate busts and a long succession of Far

West irrigation district defaults in the 1900-1930 period, and (f) the special problems of the 1930's, beginning with Florida real estate.[3]

> Two facts about the time distribution of defaults over this hundred-year period from 1830 to 1930 stand out: the first is that defaults were almost continuous, in good times and bad; the second, that only in major depression periods did the volume swell to anything like dangerous proportions.[4]

The record by Census regions, in descending order of fiscal probity, finds the East at the top, followed by the North Central and midwestern states, the West with its irrigation district problems, and the South, the region with the most damaged reputation of all. (As both Hillhouse and Studenski point out, it is unfair to generalize about the South's performance in the Civil War and reconstruction period, although Chamberlain disagrees.[5]

A persistent and frustrating attempt was made throughout the 1930's to define the term "default" and to estimate both the number of State and local governmental units affected and the amounts involved. Hillhouse's text refers to scores of such estimates, the most authoritative ones emanating from the files of The Bond Buyer, with its editor establishing the amounts actually in default at the peak in the range of $150-300 million or 1-2 percent of the total municipal debt.[6] In about half the states, no serious defaults occurred, but almost half of Florida's taxing districts were in default, while nine states had more than fifty defaulting municipalities, over and above defaulting special districts. The roll of the States with cities over 10,000 in default was given as follows:[7]

TABLE 8

State	No. of Cities 10,000 or more population in default	Total no. of cities with 10,000 or more population
Ohio	24	61
Michigan	21	41
New Jersey	18	54
No. Carolina	10	23
Florida	9	15
Texas	5	36
Tennessee	2	8
Kentucky	2	13
Louisiana	1	9
Arkansas	1	9

The record of default during the Depression was felt to be relatively mild, certainly in comparison to foreign, railroad, industrial, and public utility bonds. Considerable confusion was caused by the early attempts to create State administrative machinery to handle municipal bankruptcies and to affirm the inconstitutionality of the Federal Municipal Debt Adjustment Act of 1934.[8] By the time acceptable legislation was passed, most of the larger cities from New York down had passed through their crises, reduced their expenditures, and been restored in the graces of their creditors. By the end of the 1930's only hopelessly uneconomic special districts and real estate speculations were in default.

Attention to the matter of defaults in the post-war period had focused on two different types of situations.[9] The first is the

possibility of municipal bankruptcy for a limited number of very large cities overwhelmed by problems of race, poverty, and suburban exodus and undersupported by intergovernmental subsidies for the welfare responsibilities given them; the solution to their problem is beyond the power of the local finance administrator. The second focus of concern is in regard to revenue bond issues, a form of indebtedness that has come to play a leading role in the post-war period.

APPENDIX J NOTES:

1. See chapter on Ratings in Rabinowitz.
2. This is also the feeling expressed in the Economic Reports of the President.
3. Hillhouse, Municipal Bonds, especially Ch. IV.
4. Hillhouse, op. cit., p. 38.
5. See Chapter 2 (C) above.
6. Hillhouse, op. cit., p. 13 ff.
7. Hillhouse, op. cit., p. 27.
8. See discussion of Act in Neff.
9. Well-reported in the Joint Economic Committee study.

APPENDIX K

EXTENT OF BORROWING FOR LOCAL PUBLIC CONSTRUCTION

Earlier chapters have analyzed the historical process by which State and local governments were deprived of the privilege of constructing revenue-producing facilities for the conduct of commerce and industry and restricted, at a later date, in their attempts to help finance the private enterprises that were developed to fill the gap.

By the turn of the century, however, municipalities, later joined by the States, were again in the construction business, largely in connection with non-revenue producing activities such as public schools, automobile roads, waste disposal facilities, fire and police stations, and city halls. When recourse was made to the bond markets, these governments offered only their general obligations, backed by their full faith and credit based on the power to levy taxes on property.

Some revenue bonds were issued for public utilities, but it was not until the coming of major tunnels, bridges, and toll-highways and the demand for very large power and water supply

systems in the West that revenue bonds represented a significant share of new bond issues offered.

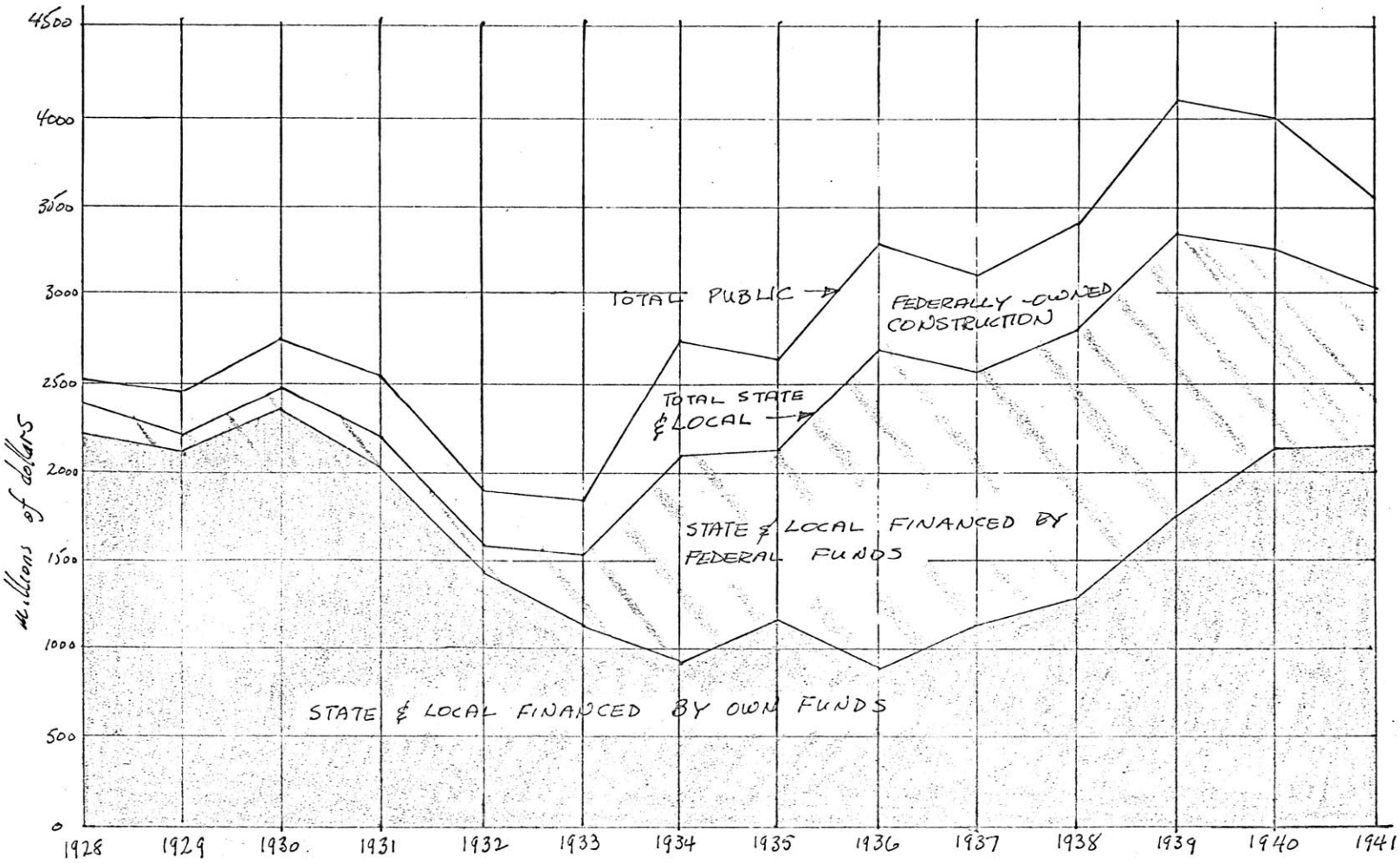
We have also observed the historical process by which the federal government was rendered unable to participate directly in the construction of internal improvements during the one-hundred-year period between Jackson and the Depression of the 1930's. That latter crisis confirmed the role of the federal government as part-financier of local facilities, a role that had begun to reappear on a minor scale after World War I.

The record for the pre-World War II years is seen in Figure 20. The chart shows the temporary dip in construction that followed the 1929 crash, the saucer-shaped graph of funds supplied by State and local governments themselves, and the more erratic series of fundings of State-local projects by the federal government. State and local governments were able to sell some bonds throughout the depression years to finance the portion of construction not funded by the federal government.

Of more immediate concern is the record of the post-World War II years and the expectations for the middle-range future. The pattern of analysis follows the work of the Joint Economic Committee's 1966 study of trends in governmental expenditure in relation to resources, construction, and local indebtedness.[1] Annual capital outlays for structures and equipment are defined to include State and local new construction plus purchases of existing structures plus net purchases of equipment less compensation for construction in process. The Committee expected:

Sources of Funds for Governmental Construction, By Year, 1928-1941

FIGURE 20



Source: U.S.Census (1941)

(a) total State and local expenditures, which were 7.7% of GNP in 1947 and 9.6% in 1962, to represent 10.6% of GNP in 1975; and

(b) annual capital outlays for structures and equipment as a percentage of total expenditures for all purposes by State and local governments to stay at the 29% level for 1975, having risen from 16% in 1947 to 29% in 1962.

These projections of capital outlays are based upon the survey of capital requirements shown in Table 4 of Chapter 6 above, with State and local governments called upon to provide two-thirds (or $327.8 billion) of the $499.1 billion total. For the post-war period (1946-1966), the Joint Economic Committee concluded that long-term borrowing financed about half of the $220 billion capital outlays by State and local governments, the remainder being financed by current revenues and intergovernmental funds.

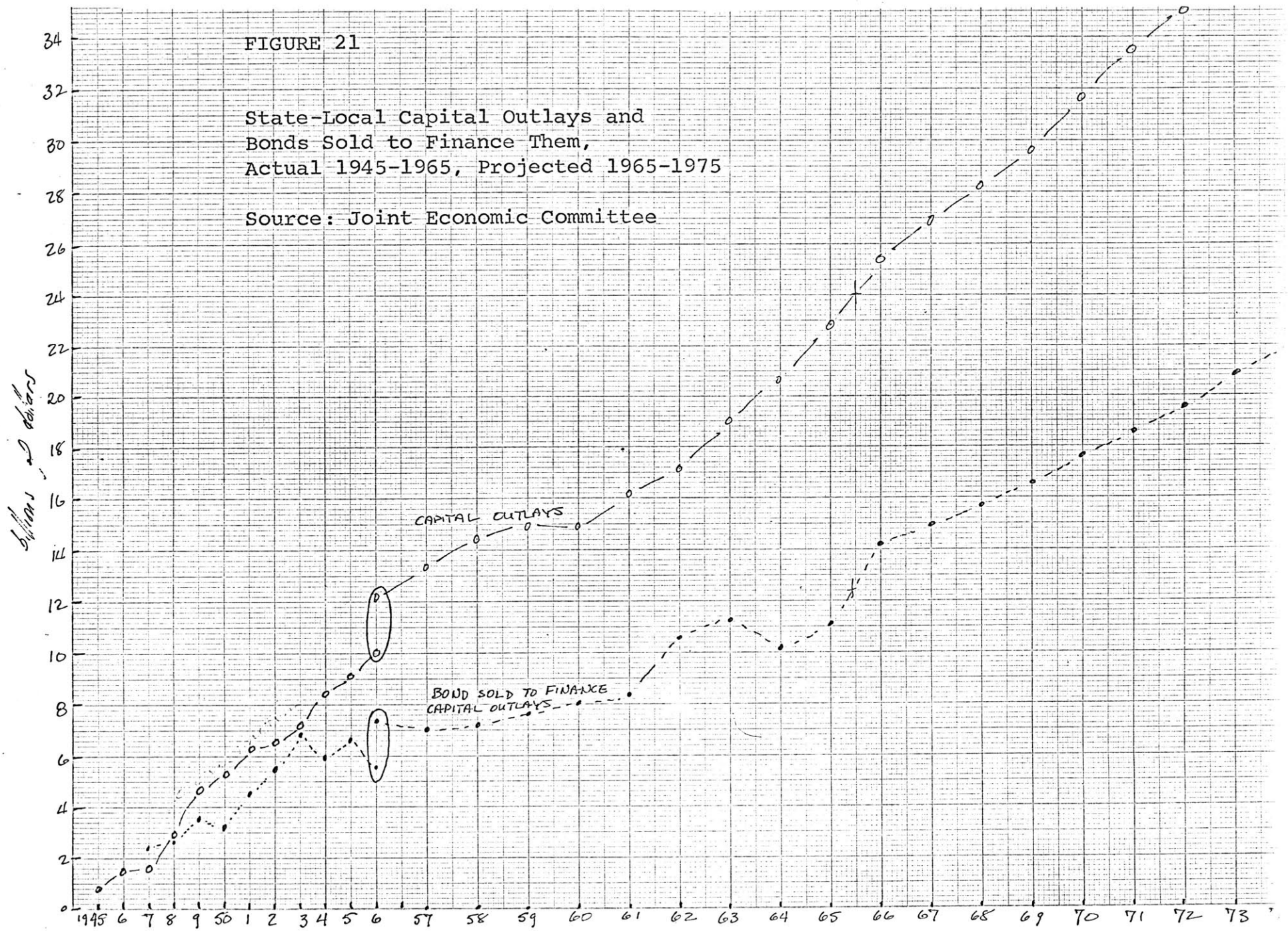
Although historical data on bond sales before the early 1950's is sparse, the Committee adjusted data from The Bond Buyer and the Investment Bankers Association for time lags, underreporting, and amounts unrelated to capital outlays and published a series representing "long-term debt issued for capital outlays." Figure 21 shows the total capital outlay and debt series for the period between 1946 and 1975 from the Committee report.

Bond sales and amounts provided by the Federal Government have both been rising faster in recent years than have the capital

FIGURE 21

State-Local Capital Outlays and
Bonds Sold to Finance Them,
Actual 1945-1965, Projected 1965-1975

Source: Joint Economic Committee



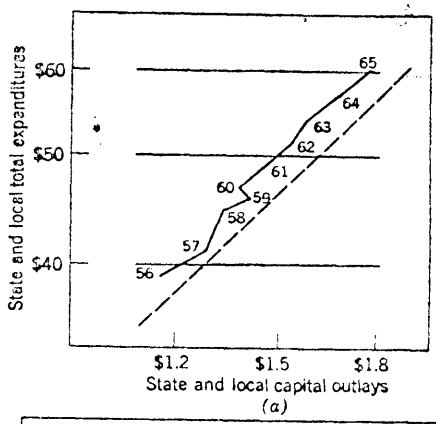
outlays of State and local governments. In general, total expenditures and capital outlays by State and local governments have risen at the same rate, except notably in the 1958 recession when expenditures continued to rise but capital outlays were cut. Federal contributions to State and local outlays, however, were increasing rapidly during the recession but were cut back in 1961, after which time they have continued to increase faster than outlays.

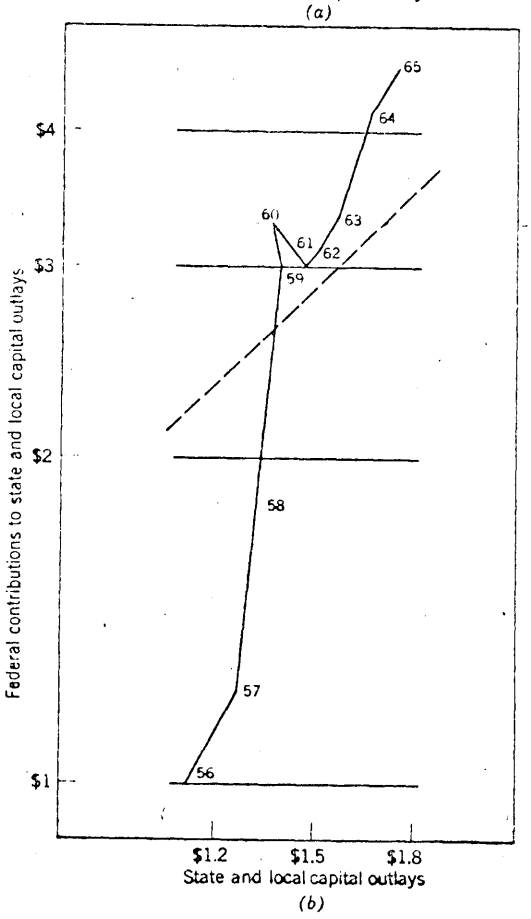
As for bonds, new issues related to outlays fell off between 1958 and 1960, and increased more rapidly than outlays thereafter until 1963, in which year they dipped before resuming a rate more in line with the growth in outlays; more or less the same relationship holds for the total new issue market.

These relationships are revealed by Figure 22 on which, for the 1956-65 period, State and local capital outlays have been compared to (a) total expenditures by State and local governments, (b) total Federal intergovernmental expenditures related to capital outlays, (c) total new bonds issued, and total bonds related to capital outlays, all of the data in 1958 constant dollars. Since the graph is on "log-log" paper, the graphs would be straight lines at a 45 degree angle if these various series were changing at the same rate; a line moving more sharply than 45 degrees from lower left to upper right is increasing faster than the capital outlay series; a line moving from upper left to lower right indicates a decrease relative to an increase in capital outlays.

Projections of bond sales, capital expenditures, and federal programs, in summary, are based upon a variety of assumptions and

FIGURE 22





Correlation Diagram: Rate of Growth of State-Local Capital Outlays Compared to:

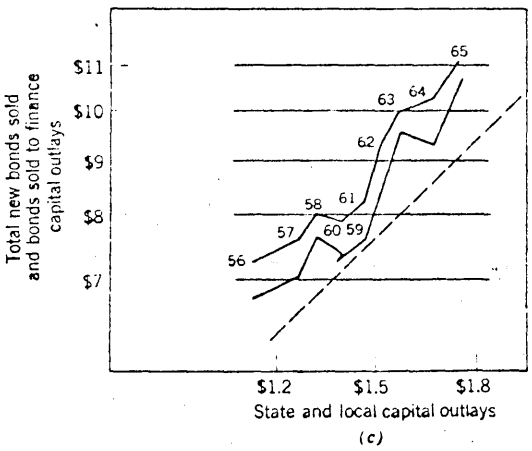
(A) Total State-Local Expenditures;

(B) Federal Contributions to State-Local Capital Outlays; and

(C) Total New Tax Exempt Bonds, and Bonds Sold To Finance Capital Outlays:

By Year 1956-65, in Constant (1958) Dollars.

Source: Joint Economic Committee data.



upon data that are suggestive but not often accurate. Nevertheless, the Joint Economic Committee study and other research materials are valuable and acceptable to the extent that the system continues relatively unchanged in terms of tax exemption, economic progress, rate of urbanization, pattern of municipal finance and price structure in the market, to name a few of the assumed conditions. There can be little doubt that the "needs" study reflects a solid demand for capital facilities. There can be more doubt as to the willingness and ability of local governments to undertake the projects forecase and even greater doubt as to the methods by which the federal government will attempt to lighten the burden.

Economists interested in both the "perversity hypothesis" discussed in Chapter 2 (D-4) and in the market for State-local bonds have attempted to explain the relationship between interest rates and the volume of bonds offered by State-local governments to finance public construction. There is some evidence that high interest rates induce some local borrowers to defer construction, but little evidence to suggest that projects are permanently abandoned because of the interest rate factor.[2]

NOTES TO APPENDIX K:

1. State and Local Public Facility Needs and Financing, see Vol. 1.
2. See JEC Financing, Vol. 2, Ch. 18 (contribution by Paul F. McGouldrick).

APPENDIX L

SIX ALTERNATIVES	FEDERAL TAX EFFECT	INTERSTATE EQUALIZATION EFFECT	OVERALL TAX BURDEN EFFECT
COMPENSATORY FISCAL APPROACH--cut Federal income tax or reduce the national debt or both depending on economic conditions.	Federal income taxpayers could expect further reductions in tax liability.	No significant effect.	The overall Federal-State-local tax system would be less progressive because the Nation would be required to place increasing reliance on proportional and regressive State and local taxes to finance rising domesti needs.
TAX CREDIT OPTION APPROACH--provide Federal income taxpayers a more generous write-off of their State and local taxes with an option plan permitting them either to itemize their State and local tax payments (as they can do now) or receive a tax credit for State and local tax payments in excess of __% of their net taxable income.	Persons in the low and middle tax brackets carrying above average State and local tax loads would receive the most benefit. Persons in the high tax brackets now enjoy a liberal write-off privilege through itemization.	No significant effect. 1/	The overall effect slightly more progressive because (a) low and middle income tax bracket taxpayers receive larger write-offs, and (b) State and local governments would be encouraged to place more reliance on income taxes in order to maximize tax credit possibilities.
TAX SHARING APPROACH--distribute to the States a designated percentage of the Federal tax revenue on the basis of collection.	None	High income States with high tax payments would receive the largest shares.	No marked change in the tax incidence picture unless Federal dollars actually replace State and local revenue sources. In that case, there is a slight progressive effect.
UNCONDITIONAL GRANT APPROACH--through a permanent Trust Fund, distribute among the States for general government purposes, on a per capita basis, an amount equal to 1% or 2% of the Federal income tax base (proposal of President's Task Force on Intergovernmental Fiscal Cooperation).	None	Moderately equalizing.	No marked change in the tax incidence picture unless Federal dollars actually replace State and local revenue sources. In that case, there is a slight progressive effect.
CONDITIONAL GRANT APPROACH--expand present type of conditional grant-in-aid programs to finance specific functions.	None	A mild to considerable effect depending on function aided and the factors cranked into equalization formula.	No marked change in the tax incidence picture unless need for State and local matching funds requires increases in regressive type taxes.
DIRECT FEDERAL EXPENDITURE APPROACH--step up direct Federal expenditure for such programs as river and harbor construction projects; or launch new programs to deal with domestic problems of an interstate character, such as air pollution and mass transportation.	None	Mild to considerable effect depending on type of beneficiary and locus of expenditure.	No marked change in the tax incidence picture. Distribution of benefits for construction type projects likely to be less favorable to low income groups than expenditures on social purposes.

1/ These shortcomings could be remedied and a significant degree of inter-area equalization could be effected by a system of negative tax cr

EFFECTIVENESS OF PLAN FROM A STATE AND LOCAL STANDPOINT	FEDERAL INVOLVEMENT IN STATE & LOCAL EXPENDITURE DECISIONS	INTERGOVERNMENTAL RELATIONS EFFECT
Least efficient because direct benefits accrue to individual Federal income taxpayers--indirect benefit to the extent that a compensatory fiscal policy promotes greater economic activity and expands the State and local tax base. Can affect willingness to raise State and local taxes either way.	None	Federal role somewhat diminished by the relinquishment of effective control of part of its fiscal resources and State and local government roles commensurately enhanced.
More efficient than outright tax cut only to extent that tax credits overcome resistance to higher State and local tax rates. Much less efficient than sharing or grant approaches because direct aid is to taxpayers rather than to governments.	None	Federal role somewhat diminished--State and local governments somewhat enhanced because a more liberal write-off of State and local taxes could help to overcome resistance to higher State and local taxes.
An efficient aid mechanism because States are left free to allocate the funds among competing needs. Local governments' benefit dependent on how they share in the funds.	None	Federal role diminished; States' role enhanced because these governments determine how funds would be spent.
An efficient aid mechanism because States are left free to allocate the funds among competing needs. Local governments' benefit dependent on how they share in the funds.	None	Federal role diminished; States' role enhanced because these governments determine how funds would be spent.
A fairly efficient aid mechanism. Both State and local governments are directly benefited but because of their specific expenditure focus, conditional grants tend to distort allocation of funds among programs.	Considerable	Federal role definitely enhanced in relation to State and local governments.
An indirect aid to the extent that direct Federal activity relieves State and local governments of the responsibility for financing the program. Far less effective than tax sharing or grant approaches.	Little or none	Federal role definitely enhanced in relation to State and local governments.

TECHNICAL EVALUATION	POLITICAL EVALUATION
The most efficient plan if the objective is to reduce (1) Federal income tax burden, (2) Federal role in relation to State and local governments and (3) the progressiveness of the total Federal-State-local tax system. From a State and local aid standpoint, quite inefficient.	Probably the first choice of most political conservatives and the most objectionable course of action from a liberal point of view.
The most efficient approach if the objective is to cut the Federal income tax while increasing the progressiveness of the tax system and maximizing indirect benefits of Federal tax reduction to State and local governments. However, it provides no benefit for persons at lowest income level with no Federal tax and renters could write-off State and local sales and income taxes but not the property tax. It has no significant equalization effect. 1/	Probable appeal for many political conservatives and moderates (a) as compromise position between straight Federal tax cut and plans calling for greater Federal aid to State and local governments and (b) as a tax reform measure placing all Federal income taxpayers in a better position to write-off "excessive" State and local tax payments. Despite its progressivity feature, this approach would probably be opposed by most liberals as inefficient when contrasted to direct forms of Federal aid to State and local governments.
The most efficient aid plan if the objective is to shift a part of the rising costs of State and local services to a nationwide income tax without reducing the States' established responsibility for allocating public funds among competing needs. The tax sharing approach ignores the equalization issue.	This approach would probably be opposed by most liberals because it tends to aggravate the fiscal disparity as between wealthy and poor States. Some difficulty may be encountered in proving that State and local fiscal needs warrant general purpose Federal support. Probably the third choice of most conservatives.
The most efficient aid plan if the objective is to shift a part of the rising costs of State and local services to a nationwide income tax without reducing the States' established responsibility for allocating public funds among competing needs. The unconditional grant approach provides for a moderate degree of interstate equalization.	Because of its middle-of-the road position, it could pick up support from the left and the right as a compromise measure despite the novel character of this aid plan. Some difficulty may be encountered in proving that State and local fiscal needs warrant general purpose Federal support.
The most efficient aid plan if the objective is to help State and local governments to finance specific programs. While this approach has equalization possibilities, it tends to distort allocation of funds among programs.	Due to its Federal control and equalization possibilities this approach receives considerable political support from most liberals. Because of its time-tested character, it also enjoys a certain measure of general political acceptance not accorded to tax credit and unconditional grant proposals. Political conservatives can be expected to resist this approach since it would increase Federal involvement in State and local affairs and might preclude a Federal income tax cut.
The most efficient approach if the objective is to bring direct Federal action to bear on the solution of a national domestic problem. From a State and local aid standpoint, quite inefficient.	Strong political appeal for liberals particularly if direct Federal expenditures fall in the social welfare category. Conservatives can be expected to oppose since it would increase Federal control on the domestic front and might preclude a Federal income tax cut.

NOTES TO CHAPTER 1: TOWARD NEW POLICIES

1. The reader will note several references in the text concerning the neglect of this subject in the literature of fiscal federalism. This present work attempts to shed light on the fundamental historical and theoretical aspects of municipal policy with respect to capital expenditures; the author's earlier study, Municipal Bond Finance and Administration, in contrast, accepts without question the appropriateness of the legally-approved bonds being issued by local governments and is wholly concerned with the process by which such bond issues are marketed and with the uncertain future of the market. See also Chapter 6 (C).

2. An excellent analysis of the emergence of the direct federal-city relationship is found in Martin, Cities and the Federal System.

3. See APPENDIX D.

4. John Gardner, in his Godkin Lectures at Harvard, Spring, 1969.

5. These are only a few examples of the economic and political climate during the months this dissertation was being written. The Watson Amendment, rejected in a state-wide referendum, would have (a) reduced property taxes and ultimately prohibited the use of property taxes "for education, welfare, and other services unrelated to property" (see Wall Street Journal, 11/1/68, p. 8); the Youngstown school system closed a month early for lack of funds (Wall Street Journal, 12/18/68, p. 1); New York City threatened to cut back its welfare budget; and headlines like this, "Three more tax-exempts fail to draw any bidders," (Wall Street Journal, 12/20/68) were seen frequently.

NOTES TO CHAPTER 2: DEVELOPMENTAL STAGE

1. This chapter is an evaluation of the historical progression documented in greater detail in APPENDIX B.

2. The Report on Relief of the States (and its antecedents) is also discussed in Balles, Financial History of the United States from 1789-1860. See entry in bibliography under U. S. Congress.

3. Adams, Public Debts, p. 341.

4. Hillhouse, Municipal Bonds, p. 145.

5. See Studenski, Public Borrowing, p. 13.

6. Lancaster, State Supervision of Municipal Indebtedness, p. 23.

7. See APPENDIX C.

8. Mumford, The City in History, p. 476.

9. See notes on Censuses in APPENDIX D.

10. See Shaw, G. B., ed., The Fabian Essays in Socialism, p. 49, etc.

11. An embittered view of this process is found in Klein, Bankrupting a Great City (New York).

12. See Municipal Finance Officers Association, "Factors in Determining Municipal Utility Rates," Special Bulletin 1965A.

13. See quotes in APPENDIX B (K).

14. The subject of restrictions is covered in works included in the bibliography by Lancaster, Secrist, U. S. Advisory Commission on Intergovernmental Relations (hereafter cited as US/ACIR), and U.S. Congress, Joint Economic Committee (hereafter cited as US/JEC), "State and Local Public Facility Needs and Financing."

15. See Durand; also Ely, Taxation in American States and Cities; Seligman, Essays in Taxation.

16. The subject of the property tax is widely discussed, but we limit references here to several important studies from US/ACIR: "Fiscal Balance in the American Federal System," hereafter cited as "Fiscal Balance..." and "The Role of the States in Strengthening the Property Tax." See also Netzer.

NOTES TO CHAPTER 2: DEVELOPMENTAL STAGE (continued)

17. "The relationship between state-local tax revenue and personal income is a rough measure of tax effort," from US/ACIR's "Fiscal Balance...", p. 77. See also the original US/ACIR treatise, "Measures of State and Local Fiscal Capacity and Tax Efforts."

18. Chamberlain, The Principles of Bond Investment.

NOTES TO CHAPTER 3: MAJOR POLICY ISSUES IN THE 20TH CENTURY

1. The Court's decision in Commissioner vs. Shamberg's Estate, 323 U.S. 792, was in connection with the financing of the Port of New York Authority; a more complete discussion with bibliography is found in Rabinowitz, Municipal Bond Finance and Administration, Chapter 8.

2. For an excellent discussion of Dillon's Rule, see Martin, Cities and the American Federal System, p. 28 ff.

3. See APPENDIX D.

4. Bryce quoted in Vigman, Crisis of the Cities, Ch. 2.

5. Ely, The Coming City.

6. Council of State Governments, State-local Relations, Ch. VI.

7. For data in this section, see U.S. Bureau of Census, Historical Statistics of the U.S. (1960 ed.), Section Y, and current Economic Reports of the President. See also APPENDIX D.

8. See also APPENDIX E.

9. See US/ACIR, "The Problem of Special Districts in American Government," among many other studies on the subject.

10. See Note 1, above.

11. See US/JEC, Vol. 2, Ch. 7 (Curley), and U.S. Dept. of Commerce, "Highway Bond Financing."

12. Our attempt to shed light on the way in which the rating of a municipality changes is found in APPENDIX I, especially Section I therein.

13. See APPENDIX J.

14. See US/ACIF studies on tax overlapping.

15. This is the author's interpretation of what "fiscal balance" means.

16. The following comments on the distribution of the income tax, other non-property taxes, and the property tax have been abstracted from US/ACIR's "Fiscal Balance..." p. 105 ff.

17. See Robinson, The Postwar Market for State-local Securities, p. 3; also Rabinowitz, op. cit., Ch. 10.

NOTES TO CHAPTER 3: MAJOR POLICY ISSUES IN THE 20TH CENTURY (continued)

18. The Atlas case involves the allocation of tax exempt interest by insurance companies between reserves and operating income and is discussed in Rabinowitz, op. cit., Chap. 10. The principles seem to be found in the tax reform bills being submitted to the Congress by the Nixon administration at this writing for application to high-income individuals.

19. The original demonstration of this effect was made by Robinson, op. cit., and concurred in by Ott and Meltzer, Federal Tax Treatment of State and Local Securities.

20. US/ACIR, "Fiscal Balance...," p. 248 and Table, p. 166.

21. Ibid., p. 260.

22. Keynes, General Theory of Employment, Interest, and Money, p. 101

23. Hanson, A. H. and Perloff, State and Local Finance in the National Economy.

24. Musgrave, Public Finance, Ch. 19. See also, the recommendations in Studenski, Public Borrowing.

25. Rafuse, R. W., Jr., "Cyclic Behavior of State-local Finance," in Musgrave, Essays in Fiscal Federalism.

26. Report of the National Commission on Urban Problems, "Building the City"; see our APPENDIX F.

27. See Hatry, H. and Cotton in the bibliography; see also Rabinowitz, op. cit., Ch. 12, and further comment in our Chapter 9 (A) below.

28. Musgrave, Public Finance, op. cit., p. 562

29. See text in APPENDIX F.

NOTES TO CHAPTER 4: LOCAL GOVERNMENT VS. THE GENERAL WELFARE

1. See especially Adams, Public Debts, and Ely, Taxation in American States and Cities.

2. For further discussion of this point see the introductory section of APPENDIX I.

3. See Chapter 1 (A) and APPENDIX G.

4. The author is indebted to George Spiegel, Esq., Washington, D.C., for information concerning his work as counsel for municipally-owned utilities in proceedings before federal regulatory agencies.

5. Perhaps the best study of the Port of New York Authority is Bird's, but we can assume that the reader has a fair understanding of the operation of PONYA and of the general arguments for and against that type of authority.

6. Based on the author's experience as a consultant and upon recent conversations with Bernard Taper, MIT-Harvard Joint Center for Urban Studies, concerning his forthcoming study of the state of the arts in the Boston area.

7. Note should be made of the use of discounting in the model presented in APPENDIX I.

8. Based on examination of the payments by the Cambridge Housing Authority. See also Hartman's article on public housing and the many references in the literature of intergovernmental fiscal relations to the payment of monies in lieu of taxes to municipalities by federal agencies.

9. As stated in press copy of the Pomeroy Lecture by Charles Haar, convention, American Institute of Planners, Cincinnati, Spring, 1969.

10. This is consistent with the view taken by the U.S. Treasury Department, as discussed in Rabinowitz, Municipal Bond Finance and Administration, Ch. 10.

11. See the discussion of the use of federal programs for the purchase of State-local securities at submarket rates in Chapter 9 (C) below.

12. See US/ACIR, "Fiscal Balance...," p. 161.

NOTES TO CHAPTER 5: THE CITY'S ACTUAL SHARE OF FISCAL RESPONSIBILITY

1. As represented by many of the items in our bibliography. It comes as a surprise, therefore, that workable data was so scarce until the late 1950's, especially in connection with debt securities, and that so few time-series analyses of individual municipalities have been published.

2. For an excellent summary of the ACIR's various studies, see Frieden, Metropolitan America: Challenge to Federalism, and the later case studies in volume 2 of US/ACIR "Fiscal Balance...."

3. Walker, Municipal Expenditures. See also discussion of this problem in Rabinowitz, Municipal Bond Finance and Administration, Chapters 7, 11 and 12.

4. These are designated as "Type C" functions in the system described in Chapter 8 (B) below.

5. Whitelaw, W. E., An Econometric Analysis of a Municipal Budgetary Process Based on Time-Series Data.

6. The nature of the rating system is discussed in Rabinowitz, op. cit., Chapter 7. In addition, the author, with the assistance of Edwin Kuh, professor of economics at MIT, had the experience of running multiple regressions with ratings for all cities and towns in the U.S. over 25,000 population in 1960 as the dependent variables and with time-series data on the socio-economic and fiscal characteristics of those governments as the independent variables. We had only moderate success in beginning to understand the relationship between the independent variables and the ratings assigned. One can only guess, therefore, at the real reasons for the change in rating by Moody's.

NOTES TO CHAPTER 6: ACTUAL AND EXPECTED USES OF TAX-EXEMPT SECURITIES

1. Clark, The Purposes of The Indebtedness of American Cities, 1880-1912. Recall that debt outstanding for cities stood at $202 million at the end of the developmental stage analysed in Chapter 2 above.

2. See Chapter 1 (A) and APPENDIX G.

3. Most of the data discussed here is taken from the IBA's contribution to US/JEC, "Financing...." Current data is published by the IBA in its bulletin, and arrangements can be made for them to provide special tabulations using their detailed information on individual issues.

4. The primary source of data on defaults is The Bond Buyer, 67 Pearl Street, New York City, a financial publication of great longevity and prestige in the municipal bond field. The data they collected is discussed in Hillhouse, Municipal Bonds, and in Neff, Trends in Municipal Finance Since 1900.

5. Data from the Economic Reports of the President.

6. Our calculation of the relationship between the data found in the Economic Reports of the President and that published by the IBA.

7. For further discussion of this point, see Chapter 8 (A and B).

8. See APPENDIX K.

9. For full documentation of this possibility, see Rabinowitz, Municipal Bond Finance and Administration.

10. The analysis by Ott and Meltzer, in Federal Tax Treatment of State and Local Securities has been generally accepted by the contending governmental agencies as an adequate prediction of the effect of the elimination of the tax exemption feature. See also, Rabinowitz, op. cit., Chapter 10.

NOTES TO CHAPTER 7: INFLUENCE OF POLITICS ON THE FORM OF DEBT

1. See, for example, Studenski, P. and Mort, Centralized vs. Decentralized Government in Relation to Democracy.

2. US/ACIR, "Fiscal Balance...." For the proposal of the National Commission on Urban Problems, see APPENDIX F.

3. This is our interpretation of the potential for the work of Ehrenkrantz (see bibliography) and of the building authorities considered further in Chapter 8 (C) below.

4. The suggestions for State intervention in the process by which municipal governments approach the capital markets on an independent and individual basis have been discussed repeatedly in the municipal bond field, and a number of States have, since the 1930's, instituted controls of one sort or another over local bond sales, but no State has yet taken over the bond issuing function in its entirety.

5. Important sources for intuitions in this regard are listed in the bibliography under Resources for the Future and National Bureau of Economic Research.

6. For details on these units of governments, see Mariner, This Is Your Massachusetts Government.

7. Professor Lloyd Rodwin has suggested that the American doctrine is supported by the experience of the English after World War II.

8. Tabulations of relevant State laws and discussions of their significance can be found in Secrist, Lancaster, US/ACIR's studies of State constitutional and statutory restrictions, and US/JEC, Vol. 2.

9. Fine descriptions of the conditions found by the muckrakers are in Neff, Trends in Municipal Finance Since 1900, and Hillhouse, Municipal Bonds.

10. These are gems of conventional wisdom that the author has not been able to prove or disprove, but they are consistent with the discussion in APPENDIX I (section H) and with the discussions of the contemporary applications of "productivity" in Chapter 4 (B) above.

11. See discussion of New York City transit obligations in Moody's Manual of Municipals (under category New York City).

12. See, for instance, reference to the Los Angeles situation in Haar's Pomeroy Lecture, Conference of the American Institute of Planners, Cincinnati, Spring, 1969.

NOTES TO CHAPTER 8: A NORMATIVE VIEW OF MUNICIPAL DEBT POLICY

1. A summary of the argument to this point is in Chapter 1 (A).

2. A model for this approach is in US/ACIR's concept of a "representative" tax system by which to judge tax effort. See definition in Chapter Note 2:17 above, and see US/ACIR's "Measures of State and Local Fiscal Capacity and Tax Efforts."

3. A pioneering effort to consider the complementary roles of public and community organizations is in "Fiscal Planning for an Urban Community," under heading US/Department of Housing and Urban Development in bibliography.

4. See discussion in Frieden, Metropolitan America: Challenge to Federalism, with its citations to related US/ACIR studies.

5. See US/JEC, Vol. 2, "Patterns of Lease Rental Financing."

6. See Moody's Manual of Municipals, under entry for New York City (transit).

7. This point is developed at length in a demonstration study in Detroit, "Renewal and Revenue," which shows that urban redevelopment, based on heavy land-cost write-downs, will generate sufficient tax revenues only if middle- to high-income housing replaces slum housing. See reference under US/HUD in bibliography.

8. See enabling act for New York State Urban Development Corporation.

9. See bibliography under U. S. Congress, House of Representatives, Committee on Banking and Currency.

10. See bibliography under Harvard School of Design and American Institute of Planners.

11. See Mace, Wheaton, and Isard in bibliography.

12. See description in Moody's Manual on municipals under appropriate headings.

13. E.g., Housing Act of 1968, Title IV.

NOTES TO CHAPTER 9: SYNTHESIS AND GUIDELINES

1. See, for instance, Rothenberg.

2. Moore, F. T., "Operations Research on Urban Problems," (Rand), p.7.

3. For an extended discussion of the economics of property taxes on public utilities, see Harriss, C. L., "Constitutional Restrictions ....," Section VI-13 ff.

4. New York Times, May , 1969.

5. The Vice President's Handbook for Local Officials (1967)describes: HUD's Public Facility Loan program (p. 174), which can be used also to provide medical facilities (p. 237) and facilities for disadvantaged groups (p. 247); the Department of Agriculture's program of loans to rural community groups (p. 215); and the Department of Commerce's Economic Development Administration's program of grants and loans for Public Works and Development Facilities (p. 203).

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